PB-230 734

POLLUTION OF THE INTERSTATE WATERS OF THE POTOMAC RIVER AND ITS TRIBUTARIES (WASHINGTON METROPOLITAN AREA) DISTRICT OF COLUMBIA-MARYLAND-VIRGINIA. PROCEEDINGS OF THIRD CONFERENCE SESSION (RECONVENED) HELD AT WASHINGTON, D. C. ON MAY 21-22, 1970

Federal Water Quality Administration
Washington, D. C.

1970

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THIRD SESSION

(Reconvened)

of

CONFERENCE IN THE MATTER OF POLLUTION OF THE INTERSTATE WATERS OF THE POTOMAC RIVER AND ITS TRIBUTARIES

Statler Hilton Hotel
Washington, D. C.
May 21 and 22, 1970

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Third Session (reconvened) of the Conference in the Matter of Pollution of the Interstate Waters of the Potomac River and its Tributaries - Washington Metropolitan Area, States of Maryland and Virginia, and the District of Columbia, held at the South American Room, Statler Hilton Hotel, 16th and K Streets Northwest, Washington, D.C., on May 21, 1970, at 9:45 a.m.

PRESIDING:

Murray Stein, Assistant Commissioner for Enforcement and Standards Compliance, Federal Water Quality Administration, U. S. Department of the Interior, Washington, D. C.

CONFEREES:

Arnold Speiser, Chief, Water Quality Control Division, Office of Environmental Health, District of Columbia Department of Public Health, Washington, D. C.

Malcolm Hope, Associate Director, Office of Environmental Health, D. C. Department of Public Health, Washington, D. C.

Paul Freese, Deputy Director, District of Columbia Department of Sanitary Engineering, Washington, D. C.

Carl Johnson, Executive Director, Interstate Commission on the Potomac River Basin, Washington, D. C.

F. R. Blaisdell, Acting Regional Director, Middle Atlantic Region, Federal Water Quality Administration, U. S. Department of the Interior, Charlottesville, Virginia

James Coulter, Deputy Secretary, Department of Natural Resources, State of Maryland, Annapolis, Maryland

Thomas D. McKewen, Director, Environmental Health Services, Maryland Department of Health and Mental Hygiene, Baltimore, Maryland

Al Paessler, Virginia State Water Control Board

CONFEREES (Continued):

A. W. Hadder, Director, Enforcement Division,
State Water Control Board, Richmond, Virginia

THOSE IN ATTENDANCE:

Johan Aalto, Director, Chespeake Technical Support Laboratory, Annapolis Science Center, Annapolis, Maryland

Thomas C. Andrews, Natural Resources Planner, Office of the Secretary, Maryland Department of Natural Resources, State Office Building, Annapolis, Maryland

Mrs. Robert E. Baker, School Principal, 1915 Elton Road, Adelphi, Maryland

Peter H. Benziger, Assistant to Vice President, Potomac Electric Power Company, 929 E Street N.W., Washington, D. C.

James D. Bowyer, Public Information Office, MAR/FWQA, Department of Interior, Charlottesville, Virginia

Paul M. Breedenlaugh, Maryland Wildlife Federation, 3229 Avon Avenue, Baltimore, Maryland

J. J. Broderick, President, Rent-a-Cruise, P. O. Box 3678, Washington, D. C.

Mrs. Nancy L. Brown, Member, Northern Virginia Conservation Council, 5607 Hershey Lane, Alexandria, Virginia

Robert C. Brown, Executive Director, Suburban Maryland Home Builders Association, 9517 Georgia Avenue, Silver Spring, Maryland

A. T. Brust, Public Relations Manager, Fine Papers Division, Westvaco, Luke, Maryland

Mrs. William C. Bryant, Chairman, Water Resources L. W. V. 803 Hall Place, Alexandria, Virginia

O. B. Burns, Jr., Water & Air Conservation Administration, Westvaco Corporation, 299 Park Avenue, New York, N.Y.

THOSE IN ATTENDANCE (Continued):

Sue Byrnes, Research Assistant, Institute for Defense Analyses, Arlington, Virginia

George Carley, Assistant Executive Director, Interstate Commission on the Potomac River Basin, 1025 Vermont Avenue, Washington, D. C.

Warren Carter, Director, Facilities Office, FWQA/MAR, Department of Interior, Charlottesville, Virginia

William T. Christian, Jr., Enforcement Analyst, FWQA/Department of Interior, Washington, D. C.

C. Peyton Cleveland, Jr., President, Cleveland Consulting Corporation, 1660 L Street N. W., Washington, D. C.

William M. Colony, Director, Planning & Evaluation Office, MAR/FWQA/Department of Interior, Charlottesville, Virginia

Grover W. Cook, Acting Director, Office of Enforcement and Standards Compliance, FWQA/MAR Department of Interior, Charlottesville, Virginia

Miss Janet Cosner, FWQA/MAR Department of Interior, Charlottesville, Virginia

Dennis J. Cotter, Sanitary Engineer, Chesapeake Division, Naval Facilities Engineering Command, Building 57, Washington, Navy Yard, Washington, D. C.

Capt. Joseph H. Creaghead, U. S. Army, 1st U. S. Army Medical Laboratory Fort Meade, Maryland

Bernard W. Dahl, Chief, Wastewater Treatment Branch, Department of Sanitary Engineering, 5000 Overlook Avenue S. W., Washington, D. C.

Mrs. Ann C. Deane, FWQA/MAR, Charlottesville, Virginia

Robert T. Dennis, Executive Director, Potomac Basin Center, 1250 Connecticut Avenue, N. W., Washington, D. C.

F. H. Doe, Jr., Director of Utilities, Arlington County Court House, Arlington, Virginia

THOSE IN ATTENDANCE (Continued):

Thomas M. Downs, Assistant Attorney General, State of Maryland, State Office Building, Annapolis, Maryland

Jerry Duda, Chemical Engineering Supervisor, G. S. A., Washington, D. C.

K. Warren Easley, Director, Governmental Affairs, Monsanto Company, Washington, D. C.

Donald L. Elmore, Public Health Sanitarian, Prince George's County Health Department, Cheverly, Maryland

Kenneth D. Feigner, Sanitary Engineer, FWQA, Washington, D. C.

Mrs. Alex Felker, Administrative Assistant, Water Resources Engineers, Springfield, Virginia

Pamela Fenrich, Special Assistant to Director LRP & RA, National Capital Planning Commission, Washington, D. C.

Charlie Ferst, MAR/FWQA Department of the Interior, Charlottesville, Virginia

Carl D. Fetzer, USDA Soil Conservation Service, Washington, D. C.

J. Bruce Fisher, Private Citizen, 8344 Queen Elizabeth Boulevard, Annandale, Virginia

William N. Fitch, Sanitary Engineer, FWQA, 815 So. 18th Street, Arlongton, Virginia

Charles E. Fogg, Sanitary Engineer, USDA Soil Conservation Service, Engineering Division, Washington, D. C.

Rod Fredierick, Sanitary Engineer, Chesapeake Division Naval Facilities Engineering Command, Washington Navy Yard, Washington, D. C.

Philip B. Hall, Director of Public Works, City Hall, Alexandria, Virginia

James J. Hanks, Partner, Resources Development Associates, 1660 L Street N. W., Washington, D. C.

THOSE IN ATTENDANCE (Continued):

J. R. Harrison, Sales Manufacturer, ESD Hercules, Inc., 900 Market Street, Wilmington, Delaware

Mrs. Wesley C. Hathaway, Fairfax County Citizens Association, 5233 Queensberry Avenue, Springfield, Virginia

Jerome J. Healey, Engineer in Charge of Planning, Department of HEW, Bureau of Water Hygiene, 5000 Fishers Lane, Rockville, Maryland

John S. Hewins, Government Relations Corporation, Maryland National Capital Park and Planning Commission, 8787 Georgia Avenue, Silver Spring, Maryland

L. J. Hogan, Member of Congress, 1027 Longworth, Washington, D. C.

J. C. Holmes, 8062 Thorne Drive, Oxon Hill, Maryland

John Galandak, Associate, Alexander Potter Associates, 99 Church Street, New York, N. Y.

Mrs. Gloria Gerecht, Water Resources Chairman, Montgomery County Maryland League of Women Voters, 1109 Ruppert Road, Silver Spring, Maryland

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Alan B. Hais, Sanitary Engineer, D. C. Department of Sanitary Engineering, 5000 Overlook Avenue S. W., Washington, D. C.

Charles R. Hall, Engineer, Maryland Department of Water Resources, State Office Building, Annapolis, Maryland

Malcolm Hope, Associate Director for Environmental Health, D. C. Department of Public Health, 1875 Connecticut Avenue N. W., Washington, D. C.

Mrs. Susie Houchens, MAR/FWQA, Charlottesville, Virginia

THOSE IN ATTENDANCE (Continued):

Lt. Col. William A. Houston, Fairfax County Federation of Citizens Association, 5204 Cherokee Avenue, Alexandria, Virginia

Paul S. Hughes, Research Associate, Institute for Defense Analysis, 400 Army-Navy Drive, Arlington, Virginia

Tommy C. Ishee, President, Potomac Basin Federation, 371 Madison Street, Herndon, Virginia

Margo Jansohn, Reporter, Prince George's SENTINEL, 1900 Trafalgar Drive, Oxon Hill, Maryland

Dr. Norb Jaworski, Chesapeake Technical Support Laboratory, Annapolis, Maryland

Mrs. E. Myrl Jensen, League of Women Voters, 4767 North 33rd Street, Arlington, Virginia

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Kenneth M. Karch, Assistant Director of Health and Environment Protection, Metropolitan Washington Council of Governments, 1225 Connecticutt Avenue, N. W., Washington, D. C.

David O. Karraker, Environmental Education Coordinator, National Park Service, 1100 Ohio Drive, S. W., Washington, D. C.

Robert M. Keeney, Montgomery County Council, Montgomery County, Maryland

M. E. Kettler, Vice President, Kettler Brothers, Inc., 4701 - 42nd Street N. W., Washington, D.C.

Carl L. Klein, Assistant Secretary for Water Quality and Research, Department of the Interior, Washington, D. C.

Mrs. Marilyn Klein, Planning and Zoning Chairman, Fairfax County Association of Citizens Associations, 8121 Norwood Drive, Alexandria, Virginia

THOSE IN ATTENDANCE (Continued):

John W. Krasauskas, Chief, Plant Operations Branch, Corps of Engineers - Washington Aqueduct, 5900 MacArthur Boulevard N. W., Washington, D. C.

Robert Landis, Technical Staff, The Mitre Corporation, West Gate Residential Park, McLean, Virginia

Donald W. Lear, Chief, Ecology Section, Chesapeake Technical Support Laboratory, Department of the Interior, Annapolis, Maryland

John J. Lentz, Director of Health and Environmental Protection, Metropolitan Washington Council of Governments, 1225 Connecticut Avenue, Washington, D. C.

Sam Linton, Commissioner, Interstate Commission on the Potomac River Basin, Box 110, Nanjemoy, Maryland

Thomas Love, THE EVENING STAR, Washington, D. C.

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Hester P. McNulty, Chairman, Potomac Basin Inter-League Committee, League of Women Voters, 7528 Little John Court, Falls Church, Virginia

Alfred Machis, Deputy Chief Engineer, Washington Suburban Sanitary Commission, 4017 Hamilton Street, Hyattsville, Maryland

Mrs. John Makarczyk, League of Women Voters, 4624 Tara Drive, Fairfax, Virginia

Jim MacNees, Reporter, BALTIMORE SUN, 2007 Brighton Road, Avondale, Maryland

Eric S. Mendelsohn, Environmental Health Engineer, Montgomery County Health Department, County Office Building, Rockville, Maryland

John M. Meyer, Jr., Hittman Associates, Inc., 9190 Red Branch Road, Columbia, Maryland

THOSE IN ATTENDANCE (Continued):

Lewis Mingo, Engineering Technician, D. C. Department of Public Health, 801 North Capitol N. E., Washington, D. C.

Mrs. Samuel Moore, 4104 Pineridge Drive, Annandale, Virginia

George J. Moorehead, Civil Engineer, Department Sanitary Engineer, Government of District of Columbia, Presidential Building, Washington, D. C.

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P. Krishna Murtry, Regional Planner, Metropolitan Washington Government, 1225 Connecticut Avenue, Washington, D. C.

George Oberlander, Director, LRP & RA, National Capital Planning Commission, New Executive Office Building, Washington, D. C.

Hecktor W. Ocker, Sanitary Engineer, USAF, Andrews AFB, Maryland

Thomas P. O'Fannell, Assistant Chief, FWQA, D. C. Pilot Plant FWQA, 5000 Overlook Avenue S. W., Washington, D. C.

Roy L. Orndorff, Executive Secretary, Potomac River Advisory Committee, 1025 Vermont Avenue N. W. Washington, D. C.

Mrs. Jean Packard, President, Fairfax County Federation of Citizens Association, 4058 Elizabeth Lane, Fairfax, Virginia

Ted Pankowski, Conservation Associate, Izaak Walton League, 719 - 13th Street, N. W., Washington, D. C.

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Nancy Peterson, League of WomenVoters, 5539 Columbia Pike, Arlington, Virginia

Rheta Piere, Assistant Commissioner for Enforcement and Standards Compliance Office, FWQA Department of the Interior, Washington, D. C.

THOSE IN ATTENDANCE (Continued)

Victor R. Piatt, Environmental Pollution Control Officer, Naval Research Laboratory, Washington, D. C.

Peter J. Piecuch, Assistant Editor, Environmental Science & Technology, 1155 - 46th Street N. W., Washington, D. C.

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Bill Pollard, MAR/FWQA, Department of the Interior, Charlottesville, Virginia

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Donald W. Redd, Trial Attorney, U. S. Department of Justice, Law and Natural Resources Division, Department of Justice, Washington, D. C.

Paul W. Reed, Chief, Program Planning and Review, D. C. Department of Sanitary Engineering, 415 - 12th Street N. W., Washington, D. C.

Laurie Regenbogen, Senator Goodell's Office, New Senate Office Building, Washington, D. C.

Jeffrey Rein, Public Health Engineer, Prince George's County Health Department, Cheverly, Maryland

H. R. Reinhardt, Staff Assistant, U. S. Department of the Interior, Washington, D. C.

Bill Riley, Chief, Contingency Planning Section, MAR/FWQA, Department of the Interior, Charlottesville, Virginia

A. E. (Ted) Robinson, Chief, Project Investigation Section, Baltimore District U. S. Army Corps of Engineers, P. O. Box 1715, Baltimore, Maryland

Robert B. Russ, Assistant to the Chief Engineer, Washington Suburban Sanitary Commission, 4017 Hamilton Street, Washington, D. C.

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Melvin Schick, Chemist, General Services Administration, Room 7917 - 7th & D S. W., Washington, D. C.

Harvey L. Segal, Sanitary Engineer, HQ/USAF - Directorate of Civil Engineering, HQ USAF/ AFOCEK, Washington, D. C.

S. W. Shafer, Engineer-Director, Alexandria Sanitation Authority, P. O. Box 1283, Alexandria, Virginia

Henry Silbermann, Chief, Engineering Services, Maryland Department of Water Resources, Annapolis, Maryland

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Melvin E. Scheidt, Lecturer and Consultant, Johns Hopkins University, Room 513, Ames Hall, Baltimore, Maryland

Dr. David G. Stephan, Assistant Commissioner for Research and Development, FWQA, Washington, D.C.

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Kenneth Tinsley, FWQA/MAR, Charlottesville, Virginia

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Jorge A. Valladares, Principal Engineer, MNCP & PC, 6600 Kenilworth Avenue, Riverdale, Maryland

Mrs. Elizabeth S. Wallace, Consultant, Environmental Education, 5003 Fort Sumner Drive, Washington, D. C.

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Milton J. Weidler, Chief, Visual Aids, D. C. Department of Health, 801 No. Capitol Street, Washington, D. C.

Claude Westmoreland, Engineering Technician, D. C. Department of Public Health, 801 No. Capitol Street N. E., Washington, D. C.

W. F. White, District Chief, Department of the Interior, 724 York Road, Towson, Maryland

Captain Jeffery L. Yarne, Environmental Health Engineer, U. S. Army, First U. S. Army Medical Laboratory, Fort George, Meade, Maryland

Dr. George K. Young, Water Resources Engineers, Inc., 6120 Brandon Avenue, Springfield, Virginia

John W. Zelinski, Sanitary Engineer, D. C. Department of Sanitary Engineering, 5000 Overlook Avenue S. W., Washington, D. C.

PROCEEDINGS

OPENING STATEMENT

BY MURRAY STEIN,

ASSISTANT COMMISSIONER FOR ENFORCEMENT
AND STANDARDS COMPLIANCE, FEDERAL WATER
QUALITY ADMINISTRATION

MR. STEIN: The conference is open.

This third session* of the conference in the matter of pollution of the interstate waters of the Potomac River and its tributaries -- Washington Metropolitan Area, in the States of Maryland and Virginia, and the District of Columbia, has been reconvened under the provisions of the Federal Water Pollution Control Act.

This is the third session of the conference. Most of you are familiar with the previous sessions.

To open the conference I would like to call on my boss, the Honorable Carl L. Klein, Assistant Secretary of the Interior.

Mr. Klein.

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*Reconvened. Third Session held April 2-4; May 8, 1969.

STATEMENT OF THE HONORABLE
CARL L. KLEIN, ASSISTANT SECRETARY
OF THE INTERIOR FOR WATER QUALITY AND RESEARCH

MR. KLEIN: Last year, when I chaired this meeting, we set standards for the Potomac which were standards for the entire country. We set the equivalent of drinking water quality.

A year has gone by, and not a great deal has been done on it. I think we have to get the Potomac cleaned up, and I think it calls for action instead of just setting standards. We have to implement it. We have to put the whole package together.

We cannot pass the buck to the other fellow and say, "We are going to send you our sewage." We are going to have to clean it up ourselves where it shows, and this applies not just to the Potomac but all over the country.

The job is to get the Potomac cleaned up. I have seen enough rhetoric in the past year on this matter, and we think we should get it done.

In line with that is the Secretary's letter to the conferees which went out in advance on May 13:

> You will recall my letter of February 24, 1970, to the conferees of the Potomac River Enforcement Conference. In it, I urged that the conferees meet at the earliest possible date to "consider the full range of alternatives available and

to adopt the most promising of these to achieve the desired and necessary cleanup of the waters of the Potomac."

The time for the next conference session will be at hand shortly, and I view it as a time for decision.

My Assistant Secretary for Water Quality and Research, Carl L. Klein, has advised that the conferees' staffs have been working to prepare the data and material necessary for informed decision-making. My Department, too, has used the interim period to review and evaluate the available data base, and has engaged the services of a consultant, Professor Vinton Bacon of the University of Wisconsin, to render his independent views on the actions necessary to bring about the speediest possible cleanup of the Potomac.

Professor Bacon has rendered recommendations for action in three crucial problem areas, and his report will be ready in time for the next conference session. Secretary Klein and Commissioner Dominick have advised me that these recommendations will go far toward reaching our mutual goals, and I agree.

A preliminary summary of the most important points is given below in order to acquaint you with them as far in advance as possible. The final report will be speeded to you the moment it becomes available, hopefully in the next few days.

1. Blue Plains: The flow of sewage to this overloaded plant should be retained at the present design capacity of

240 MGD, with all plant components brought up to that capacity; tertiary treatment to be added and in operation by 12/31/75. At this capacity level, all "capacity rights" established through cost contributions to Blue Plains construction by Maryland jurisdictions remain intact, and all present and anticipated flows from the Potomac (Dulles) Interceptor can be accommodated, giving Blue Plains sufficient capacity to handle loads beyond 1980 and to meet water quality standards. The Washington Suburban Sanitary Commission (WSSC) should immediately commence design and construction of facilities for tertiary treatment of sewage flows generated within its jurisdiction beyond the 67 MGD to which it can be said to have established "capacity rights" at Blue Plains. No further connections to WSSC system discharging to Blue Plains should be allowed.

2. Piscataway: New scientific studies show that the present enforcement conference nutrient removal requirements afford insufficient protection to Piscataway embayment if a 30 MGD plant is built. The conference should thus require removals of 98 percent BOD_5, 98 percent total phosphorus, and 85 percent total nitrogen, without change of deadlines; in addition, the conference should insist on adequate fail-safe mechanisms to guarantee protection of the waters of Piscataway embayment.

3. Advanced Waste Treatment Package Plants: Such plants can function as interim technological solutions so that desirable

economic and population growth need not be forced to a halt. They must be regarded as temporary solutions, to be employed until -- and only until -- properly-sized central treatment facilities are built to handle present overloads. Under no circumstances should private entities or individuals be permitted to operate such plants; they must be operated by the local sewage or sanitation authority, and the effluents must meet applicable water quality standards.

I urge you and your fellow conferees to consider these recommendations, and to translate them into swift, decisive action which alone will restore the Nation's river to its rightful place.

Sincerely yours,

(Signed) Fred J. Russell

Acting Secretary of the Interior

I have seen a good many items in the newspaper about small treatment plants. Of course, this is going to have smaller plants instead of one great big plant overloading everything it wants. But it is still a regional treatment system, because you have a number of other treatment plants in Virginia already.

Second, when you get over 100,000 gallons a day there is no great saving, or there may be none at all, to have just one treatment plant.

Third, I have seen some criticism of package plants. In the past, this was a good criticism. Today it no longer is a good criticism. Well-built, well-handled package treatment plants can put out water or effluent of drinking water quality.

The job is to save the Nation's river. And, gentlemen of the conference, the job is yours.

Thank you very much.

OPENING STATEMENT (RESUMED)

BY MURRAY STEIN, ASSISTANT COMMISSIONER FOR ENFORCEMENT AND STANDARDS COMPLIANCE, FEDERAL WATER QUALITY ADMINISTRATION

MR. STEIN: Thank you, Secretary Klein, for an excellent statement. I think we can all listen to that.

I would like to say to the conferees and to the others we are going to manage the Potomac River, and I mean by that all the jurisdictions here, and we are going to see that it is cleaned up.

The purpose of the conference is to bring together the State and Federal Governments and theinterstate agencies to see whether we can take appropriate action. We recognize that both State and Federal Governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control

M. Stein

Act declares that the States have primary responsibilities and rights for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States in these activities.

At the same time, the Secretary of the Interior is charged by law with specific responsibilities in the field of water pollution control in connection with pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters which endangers the health or welfare of any persons is to be subject to abatement.

As you can readily see by the remarks of Assistant Secretary Klein and the letter signed by Under Secretary Russell, the Department of the Interior intends to carry out these responsibilities.

We will first, I think, call upon the Federal people for their remarks. After that we will have, at an appropriate time, a short recess. I would suggest that any people other than those representing the conferees at that time make arrangements with their State or interstate representatives and ask that they put them on the program.

As an alternative, you may want to make arrangements with me as chairman. If you wish to do that, or, in any event, after you have checked with your State people, I wish you would get in touch with Mrs. Piere. Would you stand up, Mrs. Piere?

Do this during the first recess, not now, and indicate about how long you expect to take in your presentation.

May we have the conferees introduce themselves?

Mr. Paessler, do you want to start at your end of the table, please?

MR. PAESSLER: Al Paessler, with the Virginia State Water Control Board.

MR. McKEWEN: Thomas D. McKewen, Department of Health, State of Maryland.

MR. COULTER: James Coulter, Department of Natural Resources, Maryland.

MR. SPEISER: Arnold, representing Mr. Malcolm Hope, D. C. Health Department.

MR. FREESE: I am Paul Freese, representing Mr. Norman Jackson of the D. C. Department of Sanitary Engineering.

MR. JOHNSON: Carl Johnson, with the Interstate Commission on the Potomac River Basin.

MR. BLAISDELL: Frank Blaisdell, Acting Regional Director, Middle Atlantic Region, of the Federal Water Quality Administration.

MR. STEIN: My name is Murray Stein. I am from the Department of the Interior. I have been designated chairman of the conference by Secretary Hickel, and I am his representative.

We will continue now with congressional statements. We have one from the Honorable William L. Hungate, of Missouri. I wonder if Mr. Cook or someone can read that statement for us.

STATEMENT OF
THE HONORABLE WILLIAM L. HUNGATE,
U.S. HOUSE OF REPRESENTATIVES,
WASHINGTON, D.C.
READ BY
GROVER W. COOK

Through a century of unprecedented industrial and technological growth, we have been extremely unresponsive to the adverse side effects of our progress which has resulted in the widespread dissipation of our natural resources. As the President said in his message to Congress, it is now or never if we are to save our environment and change our course of technological progress without destruction.

More research must be carried out to determine how we can effectively and economically control pollution. This is the purpose of the legislation I have initiated in the House. If passed, it will create regional laboratories to collect, process, analyze and disseminate information related to the quality of our environment.

As a member of the D.C. Committee, I realize the magnitude of the water pollution problems in the metropolitan area. Secretary Hickel's proposed advanced treatment plant at the existing Blue Plains facilities would be a big step in the right direction. Among other things its principal features would: 1) eliminate the need of filling in 51 acres of the Potomac River (which is the plan proposed by engineer consultants Metcalf and Eddy); 2) meet the various requirements set by the conference held by the Interstate Commission of the Potomac River Basin last November; 3) allow continued use of the existing waste facilities during construction; 4) serve as a model for an effective metropolitan sewage treatment facility.

Of course the waste disposal problem in the immediate area is but part of the overall pollution puzzle. We have to work on the problems of combined storm and sanitary sewers, silt loading and the removal of debris from shorelines and waterways.

All this sounds fine -- but where can we get the money? The estimated cost of the Blue Plains facility alone is over $300 million.

I believe that an era of cooperation between State, local and Federal authorities must become a reality, and here, in the Nation's Capital, is possibly the best place to start. The various governmental units with differing jurisdictions must share the maintenance and financing of such projects of mutual concern and need.

Likewise, we in the conference on pollution of the Potomac should rise to the occasion and make the public more aware of the financial difficulties involved. This will provide Congress with the incentive to respond to the need for more funds in combating our environmental crisis.

MR. STEIN: Thank you, Mr. Cook, for that statement from Congressman Hungate.

Is Congressman Hogan or his representative here?

(No response.)

If not, we will go on and continue with the Federal presentation. If Congressman Hogan comes in, we will put him on as soon as we possibly can.

Mr. Blaisdell, would you take over?

STATEMENT OF
F. R. BLAISDELL, ACTING REGIONAL DIRECTOR, MIDDLE ATLANTIC REGION, FEDERAL WATER QUALITY ADMINISTRATION, U. S. DEPARTMENT OF THE INTERIOR, CHARLOTTESVILLE, VIRGINIA

MR. BLAISDELL: Mr. Chairman, fellow conferees, ladies and gentlemen:

Because of his intense interest in getting on with the job for cleaning up the Potomac River, Assistant Secretary of the Interior Carl L. Klein retained the services of Vinton Bacon, Professor of Civil Engineering at the University of Wisconsin, Milwaukee, to analyze the situation and to suggest alternatives to the problems we have been facing.

Professor Bacon is unable to be here today, but I have been asked to present his report. Professor Bacon will be here tomorrow and will be available to discuss his plan with the conferees and answer any questions you may have regarding it.

The report follows:

May 19, 1970

RECOMMENDATIONS TO SPEED ACTION ON POTOMAC CLEANUP

Dear Mr. Klein:

1) The Blue Plains sewage treatment plant is overloaded.

Further, it cannot be expanded to treat the waste load which will be generated in the metropolitan area by the year 2000 (420 MGD* estimated) simply because the Potomac estuary does not have the receiving capacity even if the degree of treatment exceeds 99 percent removal. The logical solution is to remove much of the load from suburban Maryland, requiring that area to provide waste treatment plant capacity over and above its capacity rights at Blue Plains. Thus, both land and treatment capacity at Blue Plains will be reserved for the core area, the Potomac (Dulles) Interceptor area, and the capacity to which Maryland and Virginia are entitled. Of greatest importance, the Potomac will be cleaned up in less time and, in my opinion, at less cost.

*Million Gallons per Day

The capacity at Blue Plains should be leveled off at present at 240 MGD with new primary additions to be placed under construction immediately with completion by December 31, 1971, with new secondary additions to achieve 90 percent removals by December 31, 1972, and with advanced waste treatment by December 31, 1975, to achieve nutrient and organic removals. Such a program is practical. It should meet the standards of 96 percent removal of BOD*, 96 percent removal of phosphorus, and 85 percent removal of nitrogen. At 240 MGD, Blue Plains should have adequate capacity into the mid-eighties.

*Biochemical Oxygen Demand

2) The degree of treatment proposed for the 30 MGD Piscataway sewage treatment plant by past enforcement conferences is not adequate to protect Piscataway embayment from eutrophication. Newly completed FWQA scientific studies, including mathematical models and dye dispersion studies, show that the present enforcement conference removal requirements of 96 percent BOD, 96 percent phosphorus, and 85 percent nitrogen are adequate only to 15 MGD. Respectively, these removal requirements should be increased to 98 percent, 98 percent and 95 percent for a 30 MGD plant. The timetable for accomplishment should not be changed.

3) Beyond the 67 MGD capacity rights which Maryland has established at Blue Plains, no further connections to the WSSC system discharging to Blue Plains should be allowed. This need not inhibit development in the WSSC area. So-called package waste treatment plants can be installed as temporary treatment while regional facilities are being designed and constructed. They should be operated by WSSC, and stream

standards must be met. The same applies to Virginia installations.

4) Solids disposal does not impinge directly upon the Potomac River and estuary. But it can be a source of air pollution, and it can be costly, thus diverting monies from the basic treatment process. Disposal of digested sludge onto crop lands on a crop rotation basis should be given consideration now. Land should be purchased now for this purpose, and held until needed. A loading factor of 20 dry tons per acre per year is a conservation design criterion. Land disposal and utilization should prove less costly, should free some of the acreage at Blue Plains and other plants, and will close the organic cycle making beneficial use of the solids.

5) All agencies should attempt to envision their ultimate treatment plant site requirements, and sufficient land for this purpose should be purchased now.

* * *

That is the end of the report.

MR. COULTER: We have some more here.

MR. BLAISDELL: Do you want me to read that?

MR. COULTER: I think I would like to have that in the record.

MR. BLAISDELL: Mr. Coulter would like to have the kudos at the end read.

In arriving at the above conclusions, I worked very closely with your staff, with the experts from FWQA's Technical Support Laboratory at Annapolis and the Charlottesville Regional Office, and with Eugene Jensen, FWQA Assistant Commissioner for Operations. Field trips were made to Blue Plains and to potential sites for regional treatment plants.

Attached are more detailed findings and recommendations for action to abate water pollution in the Washington metropolitan area reach of the Potomac and tributaries. They are under the headings: The Blue Plains Problem, The Piscataway Problem, and Advanced Waste Treatment Package Plants.

It has been a pleasure working with you and your cooperative and competent staff.

Sincerely yours,

(Signed) Vinton W. Bacon
Professor of Civil Engineering

* * *

MR. STEIN: Do you want the attachments to this to appear in the record as if read?

MR. BLAISDELL: Yes. In fact, I think it might be well to read these for the benefit of the people here.

MR. STEIN: Before you do that, Mr. Blaisdell, I wonder if we can interrupt for a moment and let you continue after we have heard from Congressman Lawrence Hogen who has arrived.

MR. BLAISDELL: Fine.

MR. STEIN: Would you do that?

MR. BLAISDELL: Yes.

MR. STEIN: Thank you very much.

Congressman Hogan.

STATEMENT OF
THE HONORABLE LAWRENCE J. HOGAN,
U. S. HOUSE OF REPRESENTATIVES,
WASHINGTON, D. C.

MR. HOGAN: Thank you, Mr. Chairman.

Mr. Chairman, my name is Lawrence J. Hogan, and I represent the Fifth District of Maryland, comprising Prince George's and Charles County, in the Congress of the United States. I am pleased to have this opportunity to meet with you again and to assess the progress that has been made since April of last year when this conference was first convened.

One important happening since last April is the tremendous generation of public awareness of the deterioration of our environment since that time. April 22, 1970 provided the Nation a day in which to condemn publicly the general decay of our earthy surroundings as well as to decry the specific causes for concern along a particular stretch of highway, in a certain stream, or on a particular stretch of sky.

Today, I think we should take stock of that general outpouring of citizen concern, but we must emphasize the need for solutions to the problems of our own little corner of the world, as the song says. Demonstrations and rhetoric mark the first Earth Day. We must, however, do more than just verbalize our concern for ecology. We must act. And that is the purpose of this conference.

The consensus of last year's conference was that clean water would be flowing in the Potomac by 1975. This is an ambitious goal if we consider that pollution of the Potomac has been termed "critical" since 1932 when only 575,000 people were pouring raw sewage into the river.

Prince George's County, in my District, is the fastest growing county in the Nation, with a projected population of 1.6 million by 1985. The actual population as of the present time is 678,000.

A look at conditions existing here today are a rather stark reminder of the failure to plan adequately for future development and of the dire necessity for planning wisely in the years ahead.

In the last year the sewage conditions have become so bad that drastic steps have had to be taken. As you undoubtedly noted in this morning's newspaper, the State Department of Health has declared a moratorium on all sewer connections in an effort to curb the continued population growth which is, of course, contributing to our pollution problems.

Last year at this time I told you a similar story, in fact -- that the county had declared a moratorium on sewer permits and septic tank construction because the facilities were inadequate to handle the area's needs.

Some progress has been made, however. The Federal Water Quality Administration has followed through on its pledge to improve the capacities of the Piscataway sewage treatment plant in Prince George's County.

In June of last year I was pleased to announce the award of a $750,000 grant to research techniques of tertiary treatment of effluent to further reduce the pollution of Piscataway Bay and the Potomac River. And in March of this year the Washington Suburban Sanitary Commission was awarded another $1.1 million grant to increase the capacity of the Piscataway plant from 6.0 to 30.0 million gallons per day and to provide secondary treatment of the discharged effluent.

Secondary treatment is not enough, however. Tertiary treatment of wastewater must be implemented as soon as it is feasible. While secondary treatment must necessarily be retained at the present time, it is imperative that research continue on tertiary treatment at full capacity. I hope that this conference will establish guidelines for compliance with these interim measures and that they will be strictly enforced.

I hope also that the conference will make its influence felt in another important area, in recommending that the Potomac River Basin Compact be approved at the next earliest opportunity. As you know, the Virginia Legislature approved the compact this year. I am sorry to say that the Maryland Legislature had the opportunity to do so but failed. I think this was a tremendous setback for solving the problems of the Potomac, and a strong recommendation from this conference might have a significant effect in seeing that that compact is finally approved by the respective legislatures and the Congress.

I urge too that the conferees thoroughly analyze Secretary Hickel's recommendations to this conference. While his idea to speed cleanup of the Potomac through establishment of advanced waste treatment package plants is good in principle, many questions must be asked and answered about the technical feasibility of this bureaucratic blueprint.

I view the thorough analysis of this plan, as well as the study of the utilization of Blue Plains and Piscataway, which are in such crisis condition at the present time, as the most important responsibility of this conference. I hope that this will be a successful hearing, and I look forward to your recommendations for action.

MR. STEIN: Thank you, Congressman Hogan, for a very provocative statement.

MR. HOGAN: Thank you, Mr. Chairman.

MR. STEIN: Mr. Blaisdell, do you want to continue?

STATEMENT (RESUMED) OF
F. R. BLAISDELL, ACTING REGIONAL DIRECTOR, MIDDLE ATLANTIC REGION, FEDERAL WATER QUALITY ADMINISTRATION, CHARLOTTESVILLE, VIRGINIA

MR. BLAISDELL: As a part of Professor Bacon's report there were certain findings and recommendations that were made a part of the report, and I would like to summarize these because of the fact that in some instances they [illegible] repetitious of what has been presented in the report itself.

MR. STEIN: Without objection, though, the findings and recommendations as attached will be entered in the record as if read.

Will you continue, Mr. Blaisdell?

MR. BLAISDELL: The findings and recommendations in Mr. Bacon's report follow:

FINDINGS AND RECOMMENDATIONS FOR ACTION TO ABATE WATER POLLUTION IN THE WASHINGTON METROPOLITAN AREA REACH OF THE POTOMAC AND TRIBUTARIES

I. THE BLUE PLAINS PROBLEM

I. FINDINGS:

1. The Blue Plains Plant of the District of Columbia, which handles nearly 80 percent of the metropolitan area sewage load, is overloaded. Its design capacity is 240 MGD; its present load is about 250 MGD, with one-half of the sewage originating outside D. C. (Md.-114 MGD; Va.-11 MGD; D. C.-124 MGD)

2. No reading of existing agreements under which D. C. accepts sewage from other jurisdictions can yield an interpretation to the end that D. C. is obligated to overload its plant. Likewise, such agreements cannot be interpreted to hold that jurisdictions outside D. C. are relieved from the obligation to manage the sewage problems created within their own boundaries. In either case, the Potomac is the victim.

3. The Maryland counties represented by the Washington Suburban Sanitary Commission (WSSC) have established certain "capacity rights" to treatment of a portion of their sewage at Blue Plains through WSSC's contributions to that plant's construction. Such "rights" are calculated at about 45 MGD and should remain so reserved.*

4. Other "rights" to Blue Plains capacity arise from legislation authorizing the Potomac Interceptor, amounting to 22 MGD for WSSC and 42 MGD for Virginia areas when the loads

reach full design capacity. These should also remain intact.

5. Beyond these outside "capacity rights," no obligation arises for D. C. to accept sewage flows from outside its boundaries -- to the detriment of the river. Beyond this point, too, the credibility of continuing adherence to the single-large-plant approach as the best regional solution is in serious doubt.

6. On the basis of scientific studies and approved water quality standards for the metro segment of the Potomac estuary, it is apparent that the sewage load from the populations connected to Blue Plains will have to be reduced, or virtually 100 percent treatment will have to be achieved. As of 1 year ago, an excess load equivalent to the sewage from 230,000 people was imposed on Blue Plains and the 4 other smaller plants in the metropolitan area.

II. RECOMMENDATIONS:

1. The present site at Blue Plains should be reserved first and foremost for D. C. sewage, including adequate treatment for excess flows.

2. The design flows allotted to WSSC in the Potomac Interceptor (22 MGD) should continue to remain reserved, and the flows from all other WSSC sources to Blue Plains should be limited to 45 MGD, for a total of 67 MGD thus to be treated at Blue Plains.

3. The Blue Plains plant capacity should be retained at 240 MGD for the present; with all plant components brought up to that capacity, and with installation of tertiary facilities, Blue Plains should thus have sufficient capacity to beyond the Year 1980 and meet water quality standards. (See Table A)

4. WSSC should immediately commence design and construction of facilities for tertiary treatment in excess of 67 MGD, as required to meet water quality standards. No further connections to WSSC system discharging to Blue Plains should be allowed.

5. Any advanced waste treatment package plants utilized shall be considered temporary solutions and shall be operated so as to meet water quality standards.

6. The design and construction effort leading to tertiary treatment at the 240 MGD Blue Plains facilities should proceed on the following schedule:

(1) Primary Facilities -- put to contract immediately for the 240 MGD capacity, including excess flows.

(2) Secondary Facilities -- Begin design immediately and complete within 1 year; complete construction by 12/31/1972.

(3) Tertiary Facilities -- Within 1 year, begin design. Complete design within 1 year. Complete construction by 12/31/1975.

F. R. Blaisdell

Note: If these recommendations are followed, the capacity at Blue Plains can be leveled out at 240 MGD for secondary treatment. With the addition of tertiary facilities, this capacity will be adequate to some date beyond 1980, will meet water quality standards, and will allow for orderly planning to accommodate future needs anticipated beyond 1980.

F. R. Blaisdell

Table A

Design Flows at Blue Plains with WSSC Inflows Restricted

Flows from:	Actual Present Inflows (1970) (MGD)	1980 (MGD)	2000 (MGD)
District of Columbia	124	135	180
Potomac Interceptor:			
Maryland	1	10	22
Virginia	4	14	42
Other than Potomac Interceptor:			
Virginia	7	6	8
Maryland (WSSC)	113	45	45
Total to be treated at Blue Plains Plant	249	210	297

*Formula by which 45 MGD capacity rights of WSSC at Blue Plains was determined.

$$\frac{\$5.5\text{M invested by WSSC at Blue Plains}}{\$29\text{M total investment in Blue Plains from all sources}} \times 240 \text{ MGD} = 45\tfrac{1}{2} \text{ MGD}.$$

* * *

MR. STEIN: Mr. Blaisdell, just for clarification here -- and I don't want to interrupt -- but why don't you have a complete construction for primary facilities as you have for the secondary and tertiary?

MR. BLAISDELL: Well, this does not show there, Mr. Stein, but we do have a schedule on that which will be presented.

MR. STEIN: All right. I think at some time it should be presented if the conferees are to make a judgment on that.

MR. BLAISDELL: Right.

MR. STEIN: All right. Thank you.

MR. BLAISDELL: It will be presented later on.

MR. STEIN: All right. Thank you.

MR. BLAISDELL: Mr. Bacon's findings and recommendations continue as follows:

II. THE PISCATAWAY PROBLEM

Findings and Recommendations:

1. Newly completed FWQA scientific studies, including mathematical model prediction and dye dispersion results, have produced findings to show that the present enforcement conference removal requirements of 96 percent of phosphorus and 85 percent of nitrogen are not adequate to prevent accelerated eutrophication conditions with 30 MGD Piscataway treatment plant being planned by WSSC.

2. These removal requirements would have been adequate for a 15 MGD plant, and would have afforded sufficient protection for Piscataway embayment.

3. Thus, the enforcement conference will need to impose more stringent removal requirements. For the 30 MGD plant size, these will have to be not less than 98 percent BOD_5, 98 percent phosphorus, and 95 percent nitrogen.

4. There is no reason to change the time frame for accomplishment of these levels of treatment, and the timing requirements specified by the enforcement conference should be adhered to and met.

5. Because of the very high degree of sensitivity of Piscataway embayment waters to the adverse impacts of waste and nutrient inputs, adequate fail-safe mechanisms, including but not limited to standby power facilities, multiple treatment trains, absence of bypasses, sampling, analysis, warning systems, et cetera, should be provided for.

III. ADVANCED WASTE TREATMENT PACKAGE PLANTS

FINDINGS AND RECOMMENDATIONS

1. Many Washington metropolitan area sewage treatment plants are presently overloaded and thus aggravate an already difficult pollution problem in the Potomac and tributaries. In this setting of explosive population growth, local

governments must utilize the full range of technological tools -- including interim solutions -- to minimize damage to the river until permanent, adequately-sized facilities can be put in place and eliminate such overloads.

2. Package treatment plants can be an effective interim solution to relieve overloading situations without calling a total halt to all further growth. Most such plants are designed to produce effluents equivalent to secondary treatment, i.e., up to 95 percent removal of BOD_5 and suspended solids. They can be augmented, however, to yield a tertiary-equivalent type of effluent by adding sand/vacuum filter processors, lagoons, chemical precipitators for nutrient removal, et cetera. For the effluents discharged in the Washington metropolitan area to the Potomac and tributaries, such tertiary-equivalent (advanced waste) treatment is a must.

3. Size and Performance: Package treatment plants can range in size up to 1 million gallons per day (MGD) and can be used in parallel to serve more people. A 50,000 GPD unit can treat wastes equivalent to the sewage from 500 people, or 143 families (3.5 people per family). A 1 MGD unit can treat sewage for 10,000 people, or 2,857 families.

4. Other characteristics: Package plants are portable and can be moved to next location when permanent facilities are completed. The space thus vacated (usually concrete

slab) reverts back to the builder and original intended use (house, et cetera).

5. Costs and Cost Burden: Bid prices submitted in February 1970 for a package plant to be installed at Chicago, yielding 95 percent BOD and suspended solids removal, indicate a total cost of $100,000 for a 50,000 GPD unit, or $700 per family. This is equivalent to a 2.3 percent increase in the cost of a $30,000 house if the entire cost were ascribed to that single subdivision. For a 1 MGD unit serving 2,857 families, the indicated cost would be $1 million, or $350 per house, again disregarding the repeated use of the unit at other locations. It is deemed equitable that the cost burden for such interim plants should be borne by the developer who creates the housing market which attracts the people who create the sewage load. (The costs given above will increase somewhat through addition of nutrient removal facilities, as required).

6. Operation and Supervision: Proper operation and strict, continuous supervision are essential to the success of this interim technological solution, and must remain the responsibility of the local sewage authority. Under no circumstances can a developer, or other private entity, be allowed to operate a package plant.

* * *

That is Professor Bacon's report with attachments as presented to Assistant Secretary Klein.

MR. STEIN: Do you have any more material you want to put in now?

MR. BLAISDELL: I have a few comments here on it which I would like to make.

MR. STEIN: All right.

MR. BLAISDELL: Burgeoning population growth and relatively uncontrolled development in the National Capital Region continue to exert ever-expanding pressures upon existing wastewater collection and treatment facilities of all jurisdictions and agencies in the metropolitan area.

Clear evidence of the resultant effect of this explosive growth is found in the increasing number of incidents of overloaded waste treatment facilities, such as Blue Plains, Westgate, Dogue Creek, Little Hunting Creek, and Piscataway.

In many cases there is clear evidence that these overloaded conditions result in decreased treatment efficiency and even discharges of untreated wastes which further compound the already serious conditions reflected in water quality degradation in the Upper Potomac Estuary.

Public officials at the Federal, State and local level are well aware of the citizen concern being expressed over the adequacy of treatment facilities and the many reported instances of untreated and inadequately treated waste.

In Fairfax, Prince George's, and Montgomery counties there has been considerable pressure exerted upon the governing bodies to impose moratoriums upon construction of further housing developments until adequate capacities have been provided in the wastewater collection and treatment facilities serving segments of these jurisdictions.

We are all aware of the fact that moratoriums of this nature can exert undue hardship upon the construction industry and, even more seriously, upon the financial well-being of the community-at-large.

Even though this represents a serious condition in terms of economic well-being, the citizens of the metropolitan area must not be complacent, and they have every justification for insisting upon immediate action to impose such moratoriums on construction and to insist upon appropriate action on behalf of the governing bodies to correct the deficiencies in these public utility systems.

Failure of the Federal, State and local authorities to enforce water quality standards through effective planning to meet the demands of theexpanding population will only compound the present problem.

Across this country, urban areas such as Chicago and Los Angeles are recognizing that the concept of regionalization of wastewater collection and treatment facilities is evolving into a concept of decentralization -- decentralization represented by planning for and construction of a series of regional wastewater renovation plants rather than dependence upon a single regional facility.

Experience in these two urban areas indicates that the oft-stated philosophy of economy of scale has a break point in the range of 100 to 200 MGD capacity. This fact, coupled with a growing awareness of the multipurpose concept of wastewater reuse, supports our contention that the Blue Plains facility should no longer be looked upon as the most effective and efficient means for handling the majority of the wastes generated by the population of the National Capital Region.

Therefore we must insist upon prompt action on behalf of the regulatory agencies with responsibility for protecting the quality of the water resources in the Potomac Basin toward developing a water quality management program based upon the concept of decentralized regional facilities to correct the problems existing in the shortest time possible.

This water quality management program must also provide for phased expansion of such facilities as will be required to ensure no further repetition of the current overloaded conditions in the future.

This can be accomplished only through cooperation and complete coordination of the planning activities of each and every jurisdiction in the National Capital Region.

It also requires a concerted effort on the part of engineers, scientists, economists, planners, and legislators, with the complete support of the citizens of the metropolitan area.

Should the responsible jurisdictions and agencies fail in this regard, the Department of the Interior will use all legal powers under the Federal Water Pollution Control Act, including the 180-day notice, to protect this vital water resource from further degradation.

As you have been informed, the priority today is directed to ensuring immediate action on behalf of the State of Maryland through the Washington Suburban Sanitary Commission to design, construct, and place into operation decentralized regional facilities to provide adequate treatment of those wastes in excess of 67 MGD capacity currently assigned to the suburban Maryland jurisdictions in the Blue Plains facility.

It is our recommendation that the necessary facility or facilities be operational no later than July 1975.

The conferees are requested to develop appropriate time schedules for planning, design, and construction of advanced waste treatment facilities commensurate with meeting this deadline on a time schedule of phased construction commencing immediately.

MR. STEIN: Does that conclude your statement,

Mr. Blaisdell?

MR. BLAISDELL: Yes.

MR. STEIN: Do you have copies of those last remarks?

MR. BLAISDELL: Yes.

MR. STEIN: I think the conferees would appreciate having them.

Let me say I'm going to declare a slight recess now. But, first, Mr. Blaisdell --

MR. JOHNSON: Mr. Chairman, --

MR. STEIN: Yes?

MR. JOHNSON: Mr. Chairman, was that a continuation of Mr. Bacon's report?

MR. BLAISDELL: No. That was the Department of the Interior's summation of the problem as we see it.

MR. JOHNSON: All right.

MR. STEIN: I thought that was the case.

I would like to add several things. One, will you give us that figure for completion of construction which you are proposing?

MR. BLAISDELL: For Blue Plains?

MR. STEIN: For primary facilities. You can do that after the recess.

MR. BLAISDELL: All right.

MR. STEIN: As the next point, I think the conferees should consider whether they want to enter into a discussion about this now and ask questions on this now, after they have consulted their staffs, or whether you would want to wait until this afternoon or until tomorrow morning when Mr. Bacon will be here.

As I read this, I see the findings and recommendations but not the backup material of the findings and recommendations, and I guess that has to come out in discussion.

The third point I would like to bring up is that I would like to call your attention again to the procedure we are going to have for other than official State, interstate, and Federal agency participants. You should make your wishes known now to the conferees and to Mrs. Piere. Will you stand up again, Mrs. Piere, before this recess, so their minds will be refreshed?

With that, we will stand recessed for 10 minutes.

MR. BLAISDELL: Murray, could I hold just a minute? It has been pointed out to me that that construction schedule for primary facilities is in the Bacon report on the first page here.

MR. STEIN: All right. After we get back, let's have the dates.

MR. BLAISDELL: All right.

MR. STEIN: All right. Thank you. We will recess now.

(Whereupon, a recess was taken.)

MR. STEIN: Let's reconvene.

We will now hear from citizen groups and other outside people wishing to make statements.

In view of the far-reaching implications of the Federal statement this morning, I think the conferees deem it best that at least they have the lunchtime to consider these statements with their staffs. It looks now as if this conference may go over until tomorrow. Of course, tomorrow Mr. Vinton Bacon will be here.

We will call now on Mr. Johnson who has a speaker. And also we have the following speakers from Maryland: Mr. Richmond Keeney and Mr. Julian Holmes. There are several speakers from Virginia who will be introduced by Mr. Paessler.

If there are any other people from other than Virginia whose names I have not mentioned-- I understand we have several others. We have a David Karraker and an Ivan Sims.

Now, other than that, while the other speakers are proceeding, I wish if anyone has not been included he would get in touch with Mrs. Piere.

Mr. Johnson.

MR. SPEISER: Excuse me, Mr. Chairman. There is someone from the District who has a statement. I just want to let you know that there is.

MR. STEIN: We will call on you next then.

MR. SPEISER: Right.

Hester McNulty

MR. JOHNSON: I would like to introduce Mrs. Hester McNulty of the League of Women Voters.

STATEMENT OF
MRS. HESTER McNULTY, CHAIRMAN, POTOMAC BASIN INTER-LEAGUE COMMITTEE, LEAGUE OF WOMEN VOTERS

MRS. McNULTY: Mr. Chairman, I am Mrs. Hester McNulty, Chairman of the Potomac Basin Inter-League Committee, League of Women Voters. This committee, made up of the 20 State and local leagues in the Potomac Basin, has been involved in the evaluation of possible solutions for the problems of the Potomac River over a 5-year period.

In our statement before the 1969 session of this conference we commended you for reconvening at that time and voiced the hope that it would not be 10 years before another session was held. We also made the point that the recommendations of the 1957-58 conference had not resulted in a cleaner river because the growth of the metropolitan area had outstripped the treatment standards agreed to at that time.

In 1969 we also made a strong plea that adequate planning for the future be incorporated into the recommendations, that merely cleaning up the existing sources of pollution would not be sufficient. Nevertheless, here we are again, one year later. At least it did not take 10 years for the inadequacies of the recommendations of last year's conference to become apparent.

Our Leagues believe that the coordinated management of all water and related land resources in the Potomac Basin is imperative. Both the State and local Leagues in the basin are working actively for the adoption of the Potomac River Basin Compact by all of the States involved. However, the earliest the compact could become effective is 1972, and of course even that date is an optimistic one. Thus, the future of this metropolitan portion of the river largely depends on the decisions made at this conference. We are hopeful that this time round the conferees will look at the total picture, not just at the deficiencies of individual plants.

At this reconvened session the Leagues of the Potomac Basin urge the conferees:

To make a realistic evaluation of the jurisdictions that should be included in the conference area. Last year, both in our statement and in others, you were urged to expand the boundaries of this conference to include adjacent areas, such as Prince William and Charles counties, which are experiencing rapid growth and development. If the Potomac River is to be cleaned up, the pollution potential of the entire urban area must be planned for now -- not after the fact.

To coordinate the sewage treatment plans for the metropolitan area, taking into account both the total present and projected sewage load and where it can best be assimilated by the estuary. If we reach the expected population of 4½ million by 1980, even 96 percent treatment would be putting the waste equivalent of 180,000 people into the river. Since this estuary may also be our water supply, unless you are going to recommend 100 percent treatment, the decisions concerning the location and the capacity of treatment plants can no longer be made on a piecemeal basis.

In the light of the best technological information available, the maximum desirable capacity should be determined for each existing and proposed plant and the location of future plants should be carefully chosen, so the discharge will have a minimal effect on the river.

To realize that the pollution of the Potomac River is our common problem. Nothing will be accomplished as long as our local jurisdictions continue to act like independent city-states, when the State of Maryland threatens to sue the District of Columbia for polluting the Potomac, although a large portion of that pollution comes from the Maryland suburbs, and when the Federal interests infer that the problem is ours, not theirs, then unilaterally make far-reaching decisions.

This past year has had much in common with Alice in Wonderland. We have had plans to expand Blue Plains outward, upward, and not at all. We have had plans to upgrade and expand the Westgate plant and plans to abandon it. The FWQA reports that the outfall for the Piscataway plant should be into the Potomac and that the plant should not be expanded beyond 15 million gallons a day. Park Service decisions keep the effluent in Piscataway Bay, and a Federal grant is given to expand the plant to 30 million gallons a day.

We have Montgomery County wanting more and more sewer lines with little thought given as to just where all that sewage will be treated. Fairfax County has overloaded its plants and then blamed D. C. for the major pollution of the Potomac, meanwhile rezoning land that will send more sewage to Blue Plains through the Dulles Interceptor.

The WSSC has granted connections beyond the capacity of existing lines and the sewers overflow in the Cabin John area. Fairfax and Prince William pollute their own water supply, so plan to pipe the effluent overland to Neabsco Creek.

Can we not bring some order to this chaos?

Prince George's has at least acted rationally, and has refused to sewer the entire county. Can this not be a turning point?

The Potomac Basin Leagues ask you:

To weigh the alternatives on the basis of all the information available, then make the best possible decision. However, it will not be enough to just make a decision. It must be implemented, then followed up. If you decide not to expand Blue Plains and to recommend that plants be built for the Maryland suburbs on the Anacotia and elsewhere, there should be followup inspection procedures during the design, construction, and operational phase. The site and the capacity should be determined for any proposed regional plants, such as the one suggested by Alexandria and Fairfax. Could not the Park Service be persuaded to reconsider and, with stringent controls, let the Piscataway plant discharge into the Potomac?

To carefully consider the impact of portable sewage treatment plants. Would they cause more problems than they would solve? What assurance do we have that these plants would be operated efficiently? Since the past record of monitoring just a few plants in the metropolitan area has been rather dismal, what provisions would be made for the inspection of these portable facilities?

We wonder also if the use of portable treatment plants would not be in direct conflict with Maryland's new, so-called "Super Sewer Bill"?

The Leagues in the metropolitan Washington area all support planned development and orderly growth. Would the availability of these plants make the pressure for development so intense that we might end up with cleaner water and little else in the way of environmental amenities?

To give more attention to sediment control. It would do little good to clean up our other pollutants, if sediment continues to pollute the river at an ever-increasing rate. Sediment pollution must be as stringently controlled as sewage pollution if we are to have a clean river.

To communicate directly with the local governments affected by this conference. Local governments occupy a key position in the elimination of pollution since they have both the power to zone for development and to assess for facilities. For too long the collection and treatment of sewage has been relegated by local governments to technical experts who have learned not to make waves by keeping their budgets low and by providing minimal amounts of treatment.

The League suggests that one recommendation of this conference be that a meeting, mandatory if possible, be held for all of the elected officials in the metropolitan area after the new recommendations of this conference have been adopted. At this meeting the responsibility of each local government toward the implementation of the new standards and recommendations should be clearly defined -- in some of Mr. Stein's "simple declarative sentences" -- so that their obligation is understood.

At this same meeting perhaps the local charges for sewage treatment should be reevaluated. For instance, a homeowner in Fairfax County pays $3.25 a month, exactly what he paid 15 years ago. It seems realistic to bring sewage treatment charges more into line with charges for other services.

But we do not mean for the Federal Government to abdicate its responsibility. The League of Women Voters believes that financial responsibility for sewage treatment plants should be shared by Federal, State and local governments. Especially here, in the Washington metropolitan area, the Federal Government cannot justly reject its obligation. The people are here because the Federal Government is here.

The Leagues in the Potomac Basin want a clean river. We are willing to pay for it. We think many others share our views. The research done by the FWQA and other scientists has provided the know-how. Why don't we cut through the bureaucratic red tape and get the job done?

MR. STEIN: Thank you, Mrs. McNulty.

Are there any comments or questions?

(No response.)

If not, thank you very much.

I would like to indicate now the schedule, as always, gets a little more clear as we go along. We will recess for lunch as close as 5 minutes to 12 as we can and be back here at 1:30.

May we hear from the District representative?

Mr. Speiser.

MR. SPEISER: Mr. Chairman, we would like to defer that speaker I referred to until the District's progress report.

MR. STEIN: All right.

MR. SPEISER: Is that all right?

MR. STEIN: That will be fine.

May we hear from Richmond Keeney, member of the Montgomery County Council.

STATEMENT OF
RICHMOND M. KEENEY, MEMBER,
MONTGOMERY COUNTY COUNCIL

MR. KEENEY: Mr. Chairman, ladies and gentlemen, my name is Richmond M. Keeney. I am a member of the Montgomery County Council. I am here today to express my personal views and the views of other members of the Montgomery County Council with regard to the proposal that would, in effect, shut off Montgomery County from the use of the Blue Plains regional treatment facility.

Just a few months ago, the Montgomery Council completed a thorough review of a proposed 10-year water and sewer plan that was related to the provision of central services in our community. The 10-year sewer plan includes the estimated capital expenditure of $174 million during this decade, this coming decade, to expand and upgrade the regional Blue Plains pollution control plant and to augment some of the District of Columbia's trunk sewers to meet the needs of suburban Maryland.

I might inject here that Montgomery County and Prince George's County, through the Washington Suburban Sanitary Commission, have contributed and spent literally millions of dollars to assist in the building of this Blue Plains facility. There are agreements and contracts with our jurisdictions through the Sanitary Commission that essentially say that as long as the counties continue to pay for the use of this facility, that facility will accept the flow from these counties.

I will sidetrack myself again from what I have written down here. This regional facility was designed and planned many, many years ago. It was perhaps the first effort or first fruits of an effort to cooperate in this area on a regional basis.

The theory at that time was that if we can work together on a regional basis and develop a regional treatment facility, we, number one, can save money for everybody in the entire region and, number two, develop a more efficient treatment facility.

It has been toward this end, toward this goal, that Montgomery County and I know Prince George's County have proceeded. It is toward this goal that all the sewer lines in our county have been laid. We have not made provisions to build huge treatment plants as auxiliary plants because we have agreed and we have relied upon this agreement which was jointly undertaken.

Now, this commitment to regionalism, if you will, was supported by contracts and agreements. In my judgment, there is no justifiable argument now for scrapping those agreements.

It seems to me that no plan has been presented as a realistic alternative, and no real reason, in my judgment, has been presented to support this action which would essentially shut off suburban Maryland from the use of Blue Plains.

What is happening is that the rug is being pulled out from under us. We are being told that the commitment that we all agreed to earlier in the game is going to exist no longer and that all the planning that has taken place and all the investment that Montgomery and Prince George's Counties have injected into this plant are going to be down the drain.

It is interesting to note that perhaps 6 months ago we were told that additional service to Montgomery County would be held up pending expansion of Blue Plains and augmentation of the Potomac and Dulles Interceptor sewers, but now we are told that there will be no expansion, so that all those things that we have been waiting for for the last 6 months or a year, or even longer in some cases, have now been withheld from us.

I think it is also interesting to recognize that the plan at Blue Plains, under the agreements and under the understandings that had been in existence, calls for the expansion today of that Blue Plains facility from 240 MGD to I think 309 MGD, so that that would be completed by the year 1980. I think that that year had been brought back to 1975 within the past 6 or 12 months. And it would be expanded still further to 410 MGD by the year 2000, more lately figured to be in the year 1990.

To my knowledge, the reasons presented for not expanding this facility are not based on the fact that a large facility cannot work. I think we all are aware of the fact that there are far larger facilities than Blue Plains in existence which treat the effluent far more perfectly than Blue Plains treats the flow. It seems to me that our big job is to find out how we can treat the flow more efficiently.

I might add, Mr. Chairman, that this Piscataway situation is treating that flow, even though it is higher than expected at a 95 percent efficiency rating as opposed to 75 percent at Blue Plains.

As one member of the Montgomery County Council, I mean sincerely that this proposal spells out and even advocates economic disaster to untold thousands of persons who are employed in the construction industry in the metropolitan Washington area.

Now, I am not here to say that because this segment of our industry is going to be hurt, and hurt severely, this in itself is sufficient cause not to do anything. But I am here to say that if this large industry is going to be hurt that severely, we ought to begin thinking of other ways to solve the problem.

If the problem happens to be that for some reason or another we do not want to have only one facility, only one treatment plant, which we have all counted on for year and years -- but if we don't want to all of a sudden -- then, for goodness sake, let's provide the opportunity to the suburban areas to build their own treatment plants before you shut down and say we cannot use Blue Plains any longer.

This I think is one of the most critical elements of the argument that is now raging.

I heard an estimate within the last 24 hours that if Blue Plains were to be shut down to suburban Maryland it could mean -- and I am talking about the effects that it would also have in the District of Columbia -- unemployment in the construction field and its allies of something between 100,000 and 200,000 people.

That is a significant number of persons, whether you take the low figure or the high figure.

And it seems, at the very least, this conference must understand, number one, people are going to get hurt.

Number two, governments are going to be hurt.

Number three, because of these first two factors, let us consider some way in which we can accomplish the best of both goals.

The suburban communities -- I have been talking to our engineers over the last 48 hours -- tell me that Montgomery County would need probably 2 large treatment facilities to replace the capacity that we expect to use at Blue Plains. One would be on the Upper Potomac and another would be in the eastern part of the Prince George's County line.

I cannot estimate the amount of money that would be involved in constructing these two facilities, but I am sure that if we had to do it, we would do it.

But my most important question, it seems to me, was how much time it would take us to provide these facilities. And the answer from three different sources was not less than four to five years.

Now, I submit, with these factors before us, if there is some idea of pulling back and moving away from this commitment that we all agreed to earlier and have been working toward; if we are going to pull back from that, then, at the very least, provide for an additional capacity at Blue Plains to compensate and to provide for treatment of the flow from these suburban counties until they have had an opportunity -- from the standpoint of time and, in fact, if you will, just plain decency -- to build alternate plants that can handle the necessary flow.

Montgomery County has been in the forefront in working against pollution, both water pollution and air pollution. I think that it is only fair to plead with you that, because of the havoc that would be wreaked, this action must be reconsidered in the cold light of day based on the agreements and the understandings that the local governments have developed, and make absolutely sure that what we do do in the future is going to be in the best interests of everybody and not in the best interests of only one party or one person.

Mr. Chairman, thank you very much.

MR. STEIN: Thank you, Mr. Keeney.

Are there any comments or questions?

Why don't you wait up there a moment, please.

I would like to just comment here, and I don't want to raise these issues, because I think everyone has that point. I want to frame the issues for the conferees.

As I read the proposal, it does not cut off Montgomery County or Maryland, but it allows 67 MGD capacity rights. That is quite a bit for anyone.

But I think the basic problem that we have here -- and this is really the problem we have -- is that Maryland and Virginia, if you follow this proposal of the Federal people, cannot do what they have done in the past -- that is, pipe their wastes in ever-increasing quantities to the District and, therefore, absolve themselves of the legal and technical responsibilities for treating the waste and allow these wastes, however well treated, to go into one point in the Potomac.

I think Mr. Keeney is right as I understand it. The theory has changed. While we were talking about regionalism, and I think we have to have regionalism, regionalism does not necessarily mean piping all the wastes to one plant, or one major plant, but it may mean a series of coordinated plants.

R. M. Keeney

This has come up at various sessions of the conference, and we can discuss this. I have discussed this before, and I think we will have to discuss it again.

But I think the basic issue here is this: The Federal plan said that the capacity of Blue Plains should be leveled off at 240 MGD. Whatever the figure is, it is a finite figure. The point is that you cannot begin treating, treating, and treating large amounts of wastes and putting them into one point in the Potomac.

True, other areas treat large amounts of waste and put it out in one point, perhaps as large or larger than Blue Plains, but they do not have the same flow of water, as you well know, that you have in the Potomac, where we estimated sometime during the summer it took a drop of water about 28 days during August to go from Three Sisters Island to Hallowing Point, once the material gets in and sloshes back and forth.

If you have concluded that we have to have a limit on the amount of wastes put into one point, and if you also have concluded that in dealing with an estuary perhaps the most adroit method of handling the whole regional problem is carefully selecting the discharge points, I think maybe we have to face the solution that there has to be a limit on what can be piped into the District of Columbia for treatment.

Again, as I read this, I do not see a cutoff. There are quite large amounts proposed for Maryland and Virginia.

MR. COULTER: Mr. Chairman, we withheld comment on the Federal position. The amount proposed is less than is now being delivered from Maryland.

MR. STEIN: All right.

MR. COULTER: And I think if we are going to comment on these things as we go along, the States should comment on the Federal position.

MR. STEIN: All right.

MR. McKEWEN: Could I make one brief clarification for the record just on that one point at this time?

Mr. Keeney's interpretation of the Federal statement to me appears to be an accurate one in view of the fact the statement is made that beyond the 67 MGD capacity rights, which Maryland has established at Blue Plains, no further connections to the WSSC system discharging to Blue Plains should be allowed.

In view of the fact that the same statement also includes a table indicating that present sewage flows from Maryland to Blue Plains are 114 MGD, this means that it not only cuts off connections, but we are cutting off connections, and we also at the moment would be discharging 47 MGD above the indicated allowance.

So I would have to agree that what Mr. Keeney has stated is correct.

MR. STEIN: All right. By the way, I did not mean to argue the point. I just meant to frame the issues.

Let me just make one other brief statement. I think the Federal operation talks about an interim solution with package plants. So there is a proposal for a transition.

Are there any other comments on Mr. Keeney's statement?

(No response.)

If not, may we have Mr. Julian Holmes.

STATEMENT OF
JULIAN C. HOLMES, PRESIDENT, CITIZENS ASSOCIATION OF FRIENDLY, MARYLAND

MR. HOLMES: I wish once again to thank the distinguished members of the conference for this opportunity to discuss pollution in the National Capital Region, a matter which has not received the proper attention of those Federal officials charged with enforcing the Federal Water Quality Act.

I would just like to comment briefly with one word on the League of Women Voters' statement. Amen. We have been waiting to hear such statements here for a long time.

The technical problems with the latest FWQA proposal to expand the Piscataway wastewater treatment plant that serves the area in which I live are covered in my presentation to this conference on March 16. Chairman Stein has suggested that it would be proper to include that testimony in the record of this session. And because any testimony is only as meaningful as the facts on which it is based, I am providing copies of documents (numbered 1 through 33) which the conferees may find helpful and which I ask to be published as part of the formal proceedings of this conference.

MR. STEIN: A lot of these have already been published. We will include these as exhibits, without objection.

(Note: The above-mentioned documentation, marked Exhibit 1, is on file at Headquarters, Federal Water Quality Administration, Washington, D. C., and the Regional Office, Charlottesville, Va.)

MR. HOLMES: These exhibits are enclosed in the black folder. I should note that, the last time I did include exhibits, somewhere the exhibits got lost in the shuffle and did not get published.

MR. STEIN: Oh, let me make this clear, Mr. Holmes. Exhibits do not get published. They are just on file in our office and in the regional office during normal business hours for reference. I considered your request that they be published as part of the record. Because so much of this material is public material already available in libraries and other sources of publication, we will have them as exhibits.

MR. HOLMES: Well, I do feel again that any statement that a person makes is only as good as the facts on which it is based. Just to read a person's statement does not mean an awful lot unless some of the backup material is included.

MR. STEIN: That may be true, Mr. Holmes, but we really can find stuff like congressional hearings and other information in other places.

I wonder if you would continue.

MR. HOLMES: Thank you.

History - the Piscataway Affair

In the early 1960's, the Washington Suburban Sanitary Commission (WSSC), over the objections of local officials, decided to construct a sewage treatment plant at Piscataway Bay, a location where the Potomac River can assimilate no additional sewage load.

In 1966, the National Park Service offered to the WSSC a permit for a pipeline to cross Piscataway National Park so that the effluent from the proposed sewage treatment plant could be discharged directly into the river rather than into the small, shallow Piscataway embayment. The permit stipulated that the WSSC would post bond to guarantee the quality of the effluent. The WSSC refused to accept the permit. The Piscataway plant was nevertheless placed in operation in early 1968 with the effluent being discharged into Piscataway Bay. As a result, Upper Piscataway Bay has been destroyed as a fishing and recreation area. A smelly sludge flat has replaced what, three years ago, was a low-tide fishing spot.

That is why I brought these pictures -- to show the utter devastation which has been caused by this so-called model sewage plant advocated so strongly by our own State Health Department.

In August of 1968, after much public outcry at the destruction being caused by the new plant, the Federal Water Pollution Control Administration (FWPCA) published its Piscataway Bay study which suggested the impropriety of the location of the existing discharge and noted the plant's lack of proper safety features to protect the bay from raw sewage overflows during power failures. Another FWPCA report dated December 1969 (Technical Report No. 19) -- just a few months ago -- goes further and notes that the FWPCA proposal to expand the existing facility by 600 percent will not work.

But in spite of this advice from its own scientific staff and others, and in the face of the overwhelming evidence that the plant is a major destructive force in Piscataway Bay, on March 17, 1970 the FWPCA approved the 600 percent expansion project and granted $1.1 million for the construction which had actually been under way for some time. The normal requirement that plans be submitted prior to advertising for bids was waived by the FWPCA.

The justification for this shocking FWPCA action is a letter from the Maryland State Health Department proposing to use Piscataway Bay and the shoreline property of local residents and of Piscataway Federal Park for the final treatment stage for a 30 million gallon per day flow of sewage. This rather unique process, which bears the solemn endorsement of the FWPCA Acting Director of Enforcement and Compliance, would discharge the sewage effluent into a marsh where the -- and I quote from the State Health Department proposal itself --

> "residual nutrients and growth stimulating substances remaining in the effluent will probably be utilized by the aquatic plants and organisms, thus further reducing the possibility of enrichment of the main stem of the Potomac River."

The photographs which I submit reveal the stark reality of this incredible proposal, and this is simply one of the reasons why I think such photographs should be made a part of the printed record of this conference.

The devastation produced by the present 5 million gallon facility, which is billed as a "model for the Nation," is sufficient to weaken even a strong stomach.

During the first four months of this year, the Piscataway plant never attained a monthly average of 90 percent BOD removal. The February average was only 78 percent. On two days it was in the 30's. Yet the WSSC still claims today that its performance level is 96 percent BOD removal.

Just last month I was advised by a prominent member of the FWPCA staff that secondary treatment process plants such as Piscataway, even when well run, would not ordinarily produce an effluent having better than 93 percent BOD removal.

Because of the problems caused by the present 5 million gallon facility, I wrote to Assistant FWPCA Commissioner Eugene T. Jensen and asked for a copy of the FWPCA-Maryland plan for the Piscataway expansion to 30 million gallons. The only document which Commissioner Jensen was able to locate was a telegram dated March 17, 1970 in which the State of Maryland assured the FWPCA that the proposal would meet the effluent quality standards set up by this conference.

Moreover, Commissioner Jensen was not able to locate a copy or even the author of a March 17 news release memo sent from the Department of the Interior via the White House to Congressman Lawrence Hogan of Maryland.

I have included that memo as an exhibit. No one else seems to have a copy but myself, and I think it ought to go into the record.

The deadline for the submission of preliminary plans for the Piscataway expansion was set as March 1, 1970 by this conference. As of last Thursday, Commissioner Jensen knew of no plans submitted by Maryland. Yet on March 17, the FWPCA approved the expansion proposal with a grant of $1.1 million.

One month later, on about April 20, Douglas Watson of the WASHINGTON POST revealed that the FWPCA had kept under wraps the 1969 findings of its scientists that the Piscataway expansion proposal couldn't work.

That report is dated December 1969, and the work that went into that report, the data, was gathered in 1968 and the summer of 1969.

Not only does the FWPCA contract fail to require the elimination of overflow lines in the new expansion, but it specifically grants the Federal funds for the construction of secondary treatment facilities only.

I asked Commissioner Jensen last week if there was any way that the FWPCA could conceivably withhold Federal funds if the WSSC failed to construct an expanded facility to meet the effluent standards set by this conference. I could get no coherent answer.

I have submitted as one of the exhibits a copy of the telephone conversation in which we discussed this matter.

On countless occasions, we have written to local and Federal officials concerning the Piscataway affair. Some letters are answered; some are not. I have included as attachments to this testimony a number of documents which show the willingness of Federal officials to talk gallantly about maintaining the water quality standards. I have included other papers that reveal how these same officials cave in to pressure from the polluters when there is a confrontation between those who pollute and those who are charged with cleaning up our national river here in the National Capital Region.

This is another reason why I feel these conflicting statements should be made part of this record so people reading this record will know the facts on which the statements I am making are based.

We in Prince George's County are angry with the way the Piscataway affair is being handled by the Department of the Interior. It has not been a pleasant experience, and I know that my own anger has boiled to the surface on many occasions when I have attempted to obtain information about the status of the problem. I am always sorry when this happens, and I sincerely hope that we can somehow find a way to avoid what seems to be an endless series of confrontations on Piscataway.

But I do think that the Maryland public has a right to feel angry with the treatment it has received from the Department of the Interior. Many citizens, including myself, have labored long and hard to preserve the Potomac River and its shores as a national monument so that we and generations to come may enjoy the beauty of this little bit of land as it was in the days of our Nation's infancy.

Piscataway National Park came into existence through the efforts of the Accokeek Foundation and private citizens who granted scenic easements to the Federal Government. We have given much of our time and money to conduct the legal battles that have to date preserved the shoreline against the ravages of untrammeled development. We have been truly successful. The Maryland shoreline is still beautiful. But this job has been done in spite of the failure of the Department of the Interior to defend either the shore or the water of the Potomac River against land or water pollution.

But while the battle against land pollution along the Potomac is being won by the local citizens, the fight against water pollution is still being hampered by Federal officials. Some of the FWPCA officials with whom we have dealt seem to want to do the right thing. But they indicate that their hands are tied and that they "can only do so much."

On the other hand, we have found that the Assistant Secretary of the Interior for Water Quality and Research does not respond to the idea that water quality is important. His speeches on pollution are colorful, but he and other Federal officials support the polluters in Maryland and fail to take the action necessary to protect the misuse of Federal tax money.

I have listed over a dozen references which I have supplied as documentation and again plead with the chairman that these documents be included in the record of this conference for all to see.

But of overriding importance in this whole fairy tale is that the technology of high-quality sewage treatment exists today. And again I commend the League of Women Voters for pointing out the need for 100 percent sewage treatment.

To produce effluent of drinking water quality is not expensive. The ineffective secondary treatment of sewage as is done at Piscataway, Blue Plains, and other Washington area plants, is a relic of the past. The effluent from these facilities is still sewage. Effluent comparable to drinking water is produced today at Lake Tahoe. It is inexpensive, and it is high time that the Department of the Interior insisted on the high standards necessary to protect the health of the public.

Now, I would like to suggest a positive program to bring a halt to the presently programmed destruction of Piscataway Bay, and I respectfully suggest that the conference consider positive action such as the following:

1. Withdraw immediately all Federal funds for the present construction project designed to increase sewage effluent discharge from 5 to 30 MGD at Piscataway and ultimately to 150 MGD.

2. Withhold all Federal funds for expansion of the Piscataway plant until:

A. The present accumulation of fecal sludge in Piscataway Bay is removed and the menace to health is corrected.

B. Permission from the National Park Service is obtained for an effluent pipe across park property to discharge into the Potomac, withholding from Federal funds an amount satisfactory to the Park Service to serve as a bond for assurance that effluent quality standards will be met in the effluent discharged through that pipeline, with the flow not to exceed 10 million gallons per day.

C. Adequate assurance is obtained that discharge of sewage effluent into Piscataway Bay will be permanently halted.

D. Adequate plans are approved by your office whereby, within a reasonable time or times specifically stated, conference quality standards shall be met for effluent discharged by this plant including but not limited to removal of BOD (biological oxygen demand) and COD (chemical oxygen demand) substances, phosphatic substances, and nitrogenous substances.

3. Federal water quality standards should be raised for the Potomac River and its estuaries in the vicinity of the Nation's Capital, in view of the presently available technology for producing clean effluent from sewage treatment facilities.

4. Site or sites are acquired for properly located

regional sewage treatment facilities in Southern Prince George's County and/or Charles County to provide treatment sufficient to meet Federal water quality standards. Such a facility location would require allocations to the District of Columbia, Maryland and to Virginia of stated quantities of pollutants per day which each jurisdiction is authorized to discharge into the Potomac.

5. The Washington Suburban Sanitary Commission should take proper action to halt substantial leakages of surface and ground water into sanitary sewer lines, which overload sewage processing facilities. For example, after heavy rains, the intake at the Piscataway plant increases about 100 percent.

Now, that is the end of my formal remarks, but I would again like to plead with the chairman that the next several pages do list documents of substantial importance and that only with the facts can someone reading this record apprise himself of the gravity of this situation which I have discussed.

Thank you very much.

(The list of exhibits presented by Mr. Holmes follows:)

1. Federal Water Pollution Control Administration, Report - A Water Quality Study of the Piscataway Creek Watershed, Johan A. Aalto and Norbert A. Jaworski, August 1968, pages I-1, I-2, III-1, III-2, III-3, III-5, VI-25, VI-27, VII-2, VII-5.

This report written almost two years ago advised that "the current assimilative capacity of the Piscataway embayment is being exceeded by present wastewater loadings." It notes that projected loadings "will be higher than from the existing 5 million gallon facility." It dwells at some length on the unsatisfactory nature of the plant's discharge into Piscataway Bay and notes that at times, treated sewage is the only input to the bay.

2. Eugene T. Jensen, Regional Director, FWPCA, Middle Atlantic Region, Letter dated September 19, 1968 to Julian C. Holmes.

This letter notes that it is improper to discharge effluent into Piscataway Bay.

3. Proceedings of the Conference on the Matter of Pollution of the Interstate Waters of the Potomac River, 1266, April 4, 1969.

> "The conferees unanimously agreed that: The continuous application of the best available waste cleansing technology to provide the highest water quality which under no circumstances will be less than the approved water quality standards."

4. Proceedings of the conference, 1296-1297, May 8, 1969.

Assistant Secretary of the Interior Carl L. Klein:

> "The solution is in meeting the new standards proposed for the removal of suspended and dissolved solids and nutrient pollutants as recommended by the

conferees. The technique is what I refer to as exotic treatment of the type utilized by the Blue Plains pilot plant. The result is almost comparable to many of our present drinking water supplies."

". . . . The extra cost would be $1.00 per family per month in extra user charges. This is entirely reasonable and I'm sure it is acceptable to the entire Potomac."

"Gentlemen, we know the results of inefficient sewage treatment. We get a bottom of gook and unusable water."

"The problems have been analyzed; the solutions proposed are now before you; the implementation is before us."

5. Whitman, Requardt and Associates, Report dated January 24, 1969.

This engineering firm, retained by the Washington Suburban Sanitary Commission, calculated the assimilative capacity of Piscataway Bay for BOD.

6. Mrs. Camillus Clagett, Presentation to the House Committee on Interior and Insular Affairs, Hearing on Piscataway Sewage Treatment Plant, May 20, 1969.

Eye-witness account of destruction caused by existing 5 million gallon Piscataway Sewage Treatment Plant.

6a. Ruth Mathes, Southeast Chapter, Sierra Club, Statement to House Committee on Interior and Insular Affairs, Hearing on Piscataway Sewage Treatment Plant, May 20, 1969.

J. C. Holmes

Discusses folly of expanding Piscataway plant or allowing piping of sewage to the Potomac River without improving the treatment thereof.

7. Norbert A. Jaworski and James H. Johnson, Jr., Potomac Piscataway Dye Releases and Wastewater Assimilation Studies, Federal Water Pollution Control Administration, Technical Report No. 19, December 1969. Pages II-1 through II-4 and pages VI-1 through VI-3 and pages VII-1, VII-2, VII-4 and VII-11.

This recent report by FWPCA scientists once again reaffirms the impossibility of carrying out the present FWPCA contract to expand the Piscataway plant. The report specifically states that even if the effluent could be mixed throughout the upper part of the embayment, that the assimilative capacity of the bay will be exceeded by the present expansion plan.

8. Julian C. Holmes, Letter dated December 29, 1969 to Dr. Neil Solomon, Maryland State Secretary of Health and Mental Hygiene.

The letter asks for copies of official studies used to justify the Maryland proposal to expand the Piscataway plant by 600 percent.

9. Thomas D. McKewen, Director of the Bureau of Resources Protection of the Maryland State Department of Health, Proposal to expand Piscataway plant sent to Eugene T. Jensen, Regional Director of the Middle Atlantic Region Federal Water

Pollution Control Administration, dated December 31, 1969.

This proposal solicited approval from the FWPCA for the expansion of the Piscataway plant to discharge effluent into the marshy region of upper Piscataway Bay, the advanced waste treatment being the utilization of nutrients "by the aquatic plants and organisms" in Piscataway Bay.

10. Maryland State Department of Health, *Calculation* of BOD load on Piscataway Bay from the proposed Piscataway plant expansion, dated January 15, 1970.

This calculation once again shows that the proposed expansion of the Piscataway facility will exceed the assimilative capacity of the bay.

11. THE SENTINEL, *Articles* dated January 2, 8 and 22, 1970.

A review of the technical problems with the Maryland Piscataway proposal.

12. Hon. John P. Saylor, *Letter* dated January 26, 1970 to Hon. Joseph D. Tydings.

Notes Department of the Interior endorsement of violations of water quality standards.

13. Hon. John P. Saylor, *Letter* dated January 26, 1970 to Hon. Carl L. Klein.

Suggests that the Department of the Interior should prohibit violations of the water quality standards.

14. Hon. Carl L. Klein, Letter dated February 3, 1970 to James F. Vance, Esq.

Secretary Klein supports the Maryland proposal to expand the Piscataway facility.

15. Julian C. Holmes, Letter dated February 16, 1970 to Hon. S. Fred Singer, Deputy Secretary of the Interior for Water Quality and Research.

Offer of support to correct problem at Piscataway. No answer to date.

16. Julian C. Holmes, Letter dated February 16, 1970 to Hon. Carl L. Klein.

Notes concern at FWPCA support for further pollution of Piscataway Bay.

17. Four photographs labeled A, B, C and D.

These exhibits show: A and B: what floats on the water surface near the Piscataway plant outfall line; C: plastic diaper bags that fail to get processed by the model Piscataway sewage treatment plant; D: the aquatic desert produced by the Piscataway plant in upper Piscataway Bay.

18. Grover W. Cook and Thomas D. McKewen, Testimony delivered to the Prince George's County Maryland State Senate Delegation on March 4, 1970, Annapolis, Maryland.

Messrs. Cook and McKewen each testified as to the propriety of expanding the Piscataway plant and discharging the effluent into Piscataway Bay.

19. Julian C. Holmes, Testimony of March 16 to the Conference in the Matter of Pollution of the Interstate Waters of the Potomac River.

Suggested program for cleaning up the Piscataway Bay mess.

20. White House Memo sent to Congressman Lawrence Hogan. Memo dated March 17, 1970.

This document, originating within the Office for Congressional Liaison, U. S. Department of the Interior, was relayed by John E. Nidecker in the White House. The unsigned memo notes that a grant for $1.1 million has been offered to the Washington Suburban Sanitary Commission for expanding the Piscataway plant to 30 million gallons with no requirement other than for construction of secondary process treatment facilities.

21. Julian C. Holmes, Memo to Robert Ware Straus, dated March 20, 1970.

Explains my failure to locate person who originated the White House Memo.

22. Federal Water Pollution Control Administration Contract, dated March 17, 1970. Contract No. WPC-Md-233.

This is the signed contract for the $1.1 million grant for the expansion of the Piscataway plant. It specifically waives the normal requirement that plans be submitted prior to letting bids. The contract is for secondary treatment only. Secondary treatment cannot meet the conference standards for sewage plant effluent.

23. Thomas D. McKewen, Telegram to Eugene T. Jensen, dated March 17, 1970.

Telegram "assures" FWPCA that the Piscataway expansion program will meet the effluent standards required.

24. Julian C. Holmes, Letter to Eugene T. Jensen, dated March 20, 1970.

This was a request for a copy of the White House memo of March 17, and a copy of the plan for the Piscataway plant expansion. Neither document has been forthcoming.

25. Eugene T. Jensen, (now Assistant FWPCA Commissioner for Operations) Letter to Julian C. Holmes, dated March 31, 1970.

Notes failure to locate copy of White House memo, and forwards copy of McKewen telegram of March 17.

26. Lance Gay, Increased Sewage Plant Flow Is Choking Piscataway Bay, THE EVENING STAR, April 16, 1970.

27. Douglas Watson, Sewage Report Ignored, County Facility Held Threat to Piscataway Bay, THE WASHINGTON POST, April 20, 1970.

This article reveals that the FWPCA was aware of the danger of expanding the Piscataway plant, but ignored the advice given in the report written by FWPCA's own scientists last December.

28. Lance Gay, Quiet But Smelly - Spring on Piscataway Bay, THE EVENING STAR, April 27, 1970.

29. Julian C. Holmes, Letter to FWPCA Commissioner David D. Dominick, dated April 23, 1970.

The letter outlined the failure of the FWPCA procedures and the Piscataway plant expansion contract to protect Piscataway Bay against further pollution. The letter requested a stop-work order on the contract. No reply received as of May 18, 1970.

30. Hon. Carl L. Klein, Telephone Conversations with Julian C. Holmes, April 20, 1970 and April 27, 1970.

Secretary Klein said on each occasion that FWPCA officials had disobeyed his orders which were to let contracts for only those projects which were for full tertiary treatment for the full amount of effluent flow from sewage treatment plants.

31. Hon. Carl L. Klein, Letter to Julian C. Holmes dated April 24, 1970.

Letter notes that the Federal Water Quality (Pollution Control) Administration has been assured by Maryland officials that the Piscataway plant program is proper and suggests that if there is any question regarding water quality standards that one should contact Maryland officials.

32. Eugene T. Jensen, Letter to Hon. Joseph D. Tydings dated May 5, 1970.

Letter reveals that the FWPCA officials held a meeting on January 21, 1970 to discuss, among other matters, the December 1969 FWPCA Technical Report No. 19.

33. Eugene T. Jensen, Telephone Conversation with Julian C. Holmes, May 13, 1970.

Mr. Jensen reiterated the FWPCA stand that the proposal to expand the Piscataway plant by 30 million gallons is proper. He added that the conference might discuss a possible cut in the amount of expansion, but he could suggest no way in which the FWPCA could withhold funds from the expansion project if the Washington Suburban Sanitary Commission failed to construct a plant to meet the effluent quality standards.

* * *

MR. STEIN: Thank you, Mr. Holmes.

Are there any comments or questions?

I really want to thank you for your statement, Mr. Holmes. In light of some of the reaction I got after the Federal statement this morning, I knew I was going to have a really difficult job of maintaining our usual amicable Federal-State relations. That is part of my job. But I see what you have done here. You have helped me immeasurably, because in your last statement you attacked the Maryland officials vehemently, and this time you almost completely attack the Federal people. I hope the Maryland people are going to realize what we have done for you. (Laughter)

So I'm sure this is going to be very helpful.

There are several things here. And the difficulty is you mention people by name. There are a few things I know about in your statement, Mr. Holmes. One, you say, "Effluent comparable to drinking water is produced today at Lake Tahoe. It is inexpensive. . ." I do not know how inexpensive it is. But the reason that treatment is provided at Lake Tahoe is in response to a Federal enforcement action such as this.

These are the Federal officials who presumably do not want to do anything.

And I could understand Secretary Klein's statement when he talked about the degree of treatment here, saying it was comparable to drinking water.

Now, I also have one problem with your repeated comments about my close friend and colleague of many years, Commissioner Eugene Jensen, particularly where you said you could have no coherent answer.

I have worked with Mr. Jensen for at least 20 years, and I always found him very lucid, probative, and coherent.

But particularly on your point you say, "I asked Commissioner Jensen last week if there was any way that the FWPCA could conceivably withhold Federal funds if the WSSC failed to construct an expanded facility to meet the effluent standards set by the conference."

We have a memo here, and this was developed, by the way, after close consultation with Mr. Jensen. It is a memorandum dated April 27, 1970, signed by Mr. Blaisdell in the course of responding to a request from me, the Assistant Commissioner for Enforcement and Standards Compliance, FWQA. They spell out something here. It says here:

> "Before any partial payment can be made under the grant, this office" -- that is, our office -- "will require acceptable final engineering plans and specifications providing for a facility of removing 96 percent of BOD and phosphorus.
>
> "In addition, acceptable preliminary designs will be required for processes meeting the nitrogen removal stipulated by the enforcement conference."

So I think it is very clear that we have made the point that grant payments will not be made until this is forthcoming to meet the standards.

I have been in various parts of the country for a few weeks, but I really have to say that my experience in developing this with Mr. Jensen has been certainly a coherent and lucid one. I am not sure whether I can follow the kind of opprobrious remarks you make.

MR. HOLMES: Could I comment on that, Mr. Chairman?

MR. STEIN: Surely.

MR. HOLMES: Mr. Chairman, that is the specific reason that I asked to have these documents made part of the record. Because I have here a copy of the conversation that I had with Mr. Jensen in trying to find out these things. The conversation went something like this. I will not read it all.

But I asked Mr. Jensen, "But do you not withhold funds from the project until the project is completed?"

"No, we do not."

"Has Maryland yet submitted any plans for the expansion under the FWPCA contract?"

"I do not know," was the answer.

So I then asked him if we could perhaps chat about it later in the day after he checked into it, and he said he would try to get me back.

In the afternoon we went over the morning conversation, and I said, "Do you have any additional information to add as to the time schedule for payments?"

The answer was, "No, I don't think I could add anything to that."

I asked the question, "In other words, is there no way to predict when payments are to be made?"

The answer I got was, "That is correct."

I think if this entire conversation were included in the record -- and it is a long one -- the excerpts I just took out of it could not be taken out of context.

Could you, sir, give me the date of that letter that you just read?

MR. STEIN: I gave it to you.

MR. HOLMES: I missed it.

MR. STEIN: It was April 27.

MR. HOLMES: Well, April 27 was some time after the December report of the FWPCA's own scientists which says that 96 percent BOD removal is insufficient for the Piscataway plant, that the nitrogen removal is insufficient, and that the plan to expand the plant is improper.

So I suggest that the April letter is also most improper.

MR. STEIN: Mr. Holmes, you are shifting your ground. Because the jurisdiction that the enforcement conference has was to impose the requirements established by the conferees. You cannot keep talking about conversations, where you wrote a report, as being incoherent.

You know, when I went to college during the 1930's, we used to take a kind of old-fashioned subject then called philosophy. And I remember Hume when he wrote his essay on miracles indicated if 20 bishops swore on stacks of Bibles this high that there was a miracle, he would have to be skeptical about it, because he felt, in view of the scientific experience he had, there was no basis for the establishment of miracles.

Again I have to tell you, Mr. Holmes, I have been working with Mr. Jensen for 40 years, and if anyone tells me he has an incoherent conversation with him, I have to be very skeptical.

MR. HOLMES: That is, sir, why I asked to have the conversation included in the record.

MR. STEIN: The one that you wrote?

MR. HOLMES: The conversation he and I had.

MR. STEIN: Thank you. I understand your point. That will be an exhibit.

MR. HOLMES: You did ask for the cost of Lake Tahoe treatment. I have it here from one of your own people who just came back from Lake Tahoe and discussed at great length the Lake Tahoe plant.

I think it is very important that such cost figures do get into the record.

I was told that the extra cost to a typical family in the Washington area of that type of treatment, based on the Lake Tahoe experience, which is operational and not experimental, would be about $1.50 per month per family.

MR. STEIN: Mr. Holmes, I can appreciate the difficulty in telephone conversations that you might have, because I do not recall asking the costs for that Lake Tahoe treatment.

MR. HOLMES: You did mention that you did not know the cost. I just offered --

MR. STEIN: I did not say that either. I say there may be some question whether people consider that expensive or not. I think the record will bear that out.

MR. HOLMES: I beg your pardon, sir.

MR. STEIN: All right.

Are there any other comments or questions?

(No response.)

If not, we will recess for lunch until 1:30 p.m.

(Whereupon, at 12:03 p.m., the luncheon recess was taken.)

AFTERNOON SESSION

1:50 p.m.

MR. STEIN: Let's reconvene.

First, we will call on the District of Columbia.

Mr. Hope.

STATEMENT OF
MALCOLM HOPE, ASSOCIATE DIRECTOR,
OFFICE OF ENVIRONMENTAL HEALTH,
D. C. DEPARTMENT OF PUBLIC HEALTH

MR. HOPE: Mr. Chairman, ladies and gentlemen:

I apologize for not having been with you this morning. I am sure that you are not so biased that you do not realize that there are other forms of pollution that we are dealing with. We had the privilege of dedicating this morning in the District our new continuous air monitoring station. So, hopefully, we are going to do something to benefit the quality of the ambient air over the District.

Also, we are running into certain difficulties, as our friends in the Department of Sanitary Engineering may have already told you, with the problems of solid waste and refuse disposal. The public seems to be generating the idea that they are confronted with an imminent health hazard. And there may be if the strike continues for too long a period of time. But it was necessary to provide something in the way of reassurance. That is another little task that I had to perform this morning.

The report of the D. C. Health Department is going to be very brief, and it will be verbal.

As one item of unfinished business, you may recall that in our last progress report we made reference to the study that was to be carried on by the Potomac Electric Power Company as it relates to the thermal pollution of the waters in the District. So at this time I would like to call on Mr. Peter Benziger, who is the Assistant to the Vice President for Generation, to present the summary report on the findings on the thermal pollution.

MR. STEIN: When you talk about solid waste disposal and again when you talk about sanitary landfills, it reminds me of my days when I was in school when we used to talk about the Holy Roman Empire. They used to say about that it was neither holy nor Roman nor an empire. And the sanitary landfill is neither sanitary nor land nor a fill. (Laughter)

All right, Mr. Benziger.

STATEMENT OF
PETER H. BENZIGER, ASSISTANT
TO THE VICE PRESIDENT-GENERATING,
POTOMAC ELECTRIC POWER COMPANY

MR. BENZIGER: Mr. Chairman, conferees: My name is Peter H. Benziger, and I am here to present a summary report for Mr. L. W. Cadwallader, our Vice President-Generating, on behalf of the Potomac Electric Power Company.

The Potomac Electric Power Company in cooperation with the District of Columbia Department of Health and the Federal Water Quality Administration conducted extensive river temperature surveys during the summer of 1969. These surveys were conducted on the Anacostia and Potomac Rivers in the area of the company's Benning, Buzzard Point and Potomac River generating stations. Potomac Electric Power Company has completed a report on these surveys and hereby submits it for the record. It is entitled _Potomac Electric Power Company Report on River Temperature Surveys - Summer - 1969_, and is lengthy and detailed.

We wish to thank Mr. Arnold Speiser, Chief, Water Quality Control Division, District of Columbia Department of Health, and Mr. Grover Cook, Regional Enforcement Officer, Federal Water Quality Administration for their advice and assistance during the survey period. We also wish to stress that the conclusions in the report and in this statement are those of the Potomac Electric Power Company.

Summarizing, the Potomac Electric Power Company feels that the surveys were successful in their primary purpose of determining the effects on the adjacent water bodies of the thermal discharges from the three stations involved. We further feel, as a result of these surveys, that reasonable mixing zones can be established for the Buzzard Point and Potomac River stations.

There is, however, a real problem with the Benning station. It does not, at this time, meet the water quality standards. With regard to corrective action for this station, we intend to reduce the heat load by 50 percent by early 1973. However, removal of the silt bar south of the discharge and proper dredging of the river channel will also be required, and this is the responsibility of the District of Columbia and the U. S. Corps of Engineers.

These matters are discussed in detail in the accompanying report and our intent in this statement is to briefly comment on the highlights of the study. We will be glad to discuss it in detail after the officials concerned have had an opportunity to review it.

Thank you.

MR. STEIN: Thank you.

Without objection, this report entitled Potomac Electric

Power Company Report on River Temperature Surveys - Summer - 1969 will be included in the record as an exhibit and available at our headquarters in the regional office during normal business hours.

(The above-mentioned report, marked Exhibit No. 2, is on file at Hq. FWQA, Washington, D.C. and the Regional office, Charlottesville, Va.)

You made one comment, and you may or may not know we did talk about this at the Lake Michigan conference. This is the question of mixing zone. The notion we have had in recent years is that it may be to the advantage of the public, the regulatory agencies, and the Government to consider the temperature at the point of discharge rather than the mixing zone. Of course, when we talk about a mixing zone, you may get a tongue going out here or there and a wide perimeter where we have to constantly check.

Taking into account theoretically the mixing zones, I think it would be easier for a company -- even if we had to go up a degree or two or three more -- and for a regulatory agency to really put the point of determination or regulation at the point of discharge, so you will know what you are putting out right where you are putting it out and control it. We can measure it rather than deal with something in the perimeter of a half-mile or a mile, which may be subject to controversy.

I think if your industry would consider this as we have considered it -- and I think this is going to be beneficial for all concerned -- we may be better off. Because you can pretty much determine what you are going to put out at your point of discharge. But dependent on temperature, current flows, and all this and all the other variables, you cannot be quite sure what is going to happen in your area of mixing zone. These may be transitory conditions.

So I think we might propose that we try to get a regulatory technique which will be easier for the State, the interstate agencies, you, and us to live with and get this temperature at the point of discharge.

MR. BENZIGER: I would agree that would make it easier on all hands.

MR. STEIN: That is right.

MR. BENZIGER: This study, of course, was purely and simply to measure the temperatures as they existed, --

MR. STEIN: Yes.

MR. BENZIGER: -- and the mixing zone was a secondary purpose.

MR. STEIN: That is right. I think the mixing zone should be taken into account in the effect, but I think it would be an undue burden on all hands if we used the mixing zone as a regulatory technique.

Because very often, if we ask you to require a certain temperature in the mixing zone, there may be variance which occurred by conditions of which none of us was aware.

Yet if we asked you for a temperature at your point of discharge, this is something which you could control and we could measure.

MR. BENZIGER: Yes.

MR. STEIN: I would suggest to the power industry, the States, and us that we look at this approach and try to simplify this.

MR. BENZIGER: All right.

I have one more brief comment if I may.

We have a limited number of additional copies of this survey if any of the conferees or any concerned officials would like to have extra copies for their people. If they will contact us, we will certainly get the copies to them.

MR. STEIN: Right. Thank you.

Do we have Jack Alfandre?

MR. HOPE: You are not through with Mr. Hope yet.

MR. STEIN: Oh. (Laughter)

STATEMENT (RESUMED) OF
MALCOLM HOPE, ASSOCIATE DIRECTOR,
OFFICE OF ENVIRONMENTAL HEALTH,
D. C. DEPARTMENT OF PUBLIC HEALTH

MR. HOPE: You know, when you get to be as old as I am, you can exercise this kind of action. (Laughter)

I was reminded --

MR. STEIN: I haven't done much of anything else. (Laughter)

MR. HOPE: I was reminded this morning, Murray, that you and I are getting to that point where we can remember when the air was clean and sex was dirty. (Laughter)

MR. STEIN: You have got a better memory than I have, Malcolm. I can remember sex, but I'll be damned if I can remember air. (Laughter)

MR. HOPE: Just one further point.

MR. STEIN: I knew you would place it that way. (Laughter)

MR. HOPE: Touché! (Laughter)

In our last report we indicated that we were moving ahead with the development of vessel pollution regulation for vessels operating in the District waters. The District Council has actually taken action on the regulations. They have been promulgated. They will be effective in August 1971. At that time it will become illegal to discharge sewage overboard from any vessel of any type that is anchored in any of the marinas or any of the harbors within the District waters.

That in essence completes our report. I am happy to be here for the afternoon session.

MR. STEIN: We are glad to have you.

Do we have Jack Alfandre?

Will you identify yourself for the purpose of the record?

STATEMENT OF
JACK ALFANDRE, HOME BUILDERS ASSOCIATION OF METROPOLITAN WASHINGTON

MR. ALFANDRE: My name is Jack Alfandre. I am a representative of -- I guess it is a dirty word around here -- the Home Builders Association of Metropolitan Washington.

I requested to be able to say a few words to the conference today because I think, of any industry vitally involved, our industry is the most vitally involved in this problem.

I would like to say to start with that we are for clean water, and, of course, we thought that things were progressing the way they were supposed to be progressing, according to mainly the reports we received from the Washington Suburban Sanitary Commission and other sewer authorities and what we read in the newspapers.

But now we seem to think that maybe there is some sort of a crisis developing and that something drastic might be done to our industry -- which has already been started over in Prince George's County and is partially in Fairfax County and can very easily spread to all Montgomery County and the balance of Fairfax County.

We are responsible, but we are not responsible for pollution. We build the houses for the people to live in. We don't create the population, but we try to take care of them.

Other industries are faced with pollution problems -- air and water pollution. I was over at the Bethlehem Steel plant at Sparrow's Point a couple of weeks ago. They have a tremendous pollution problem, both water and air. They are fighting it. They have a 10-year program to alleviate it, and each year they put another phase in.

We thought that that was what was happening here. These phases were going in. We thought that the idea of regional sewer plants-- Maybe our interpretation is a little different than a report that I read. But Montgomery County has always thought that their sewage was going to be treated at Blue Plains. We have received assurances from Blue Plains, and we still have received those assurances -- that they can treat the sewage from Montgomery County and from part of Fairfax County, and from part of Blue Plains, treat it properly if they are allowed to expand their plants properly.

One report says we should start using portable plants. Well, if you really want to have pollution, you use portable plants. Because I tried to get one installed one time, and I don't think there is a stream big enough in Montgomery County that can handle a portable plant that will take care of maybe over 40 hours. So that you are going to have a worse pollution problem then.

All of the sewer lines have been laid out, the trunk sewers to go down, tie in to the District sewers, and go down to Blue Plains. I don't know where we would run the sewers if we had to run them to any other place but to Blue Plains. We certainly could not put a treatment plant on Rock Creek that would be large enough to take care of the sewage that flows down Rock Creek -- the Rock Creek sewer -- and down to Blue Plains -- not into Rock Creek I hope.

But these are serious problems. I have talked with Mr. Freese. He said before he started and before they went ahead with their expansion they had a consultant report, in conjunction with the Interior Department -- and I understand these agreements were all signed by the different States -- that they should expand this plant, that it was being treated properly, and that they could handle the sewage and that this is the proper way to do it.

Now, all of a sudden, another consultant has come in and decided that maybe this is not the right way to do it.

Well, I think that maybe we ought to get the facts from both of these reports before we decide to accept one consultant's report over another one and see which is right.

If Mr. Freese, before they went ahead with all of the money they intend to spend or commit in the Sanitary Commission, had decided that they could not treat the effluent to meet the standards that they need to meet, I am sure they would not have gone ahead with it.

So I think if they are left to go on with the plans that they have, they will be able to treat the sewage and they won't shut our industry down.

You know, we have another problem. HUD is giving us the dickens because we are not producing enough houses for the people to live in. And now the Interior Department says we might have to cut back because we are contaminating the rivers. Maybe there is some happy medium in between. I don't know.

But it seems like our industry is so vitally involved in the metropolitan area -- it is the second-largest industry outside of the U. S. Government -- and yet we are forced to sit on the sidelines. We are not allowed to sit on a council like this. We are not allowed to sit on the Sanitary Commission. We are not allowed to be elected to a public body because there is conflict.

And yet we have to sit by and we have to read what is happening to us in the newspaper.

I overheard a gentleman saying, "Now we will see where the builders are. Now we will see who the politicians are going to support." We don't want that. We have had that bad reputation long enough. We are honest, respectable businessmen. We want a clean Potomac. But we would like a voice in saying what is going to happen to us.

From the information we can gather, what the Sanitary Commission and what the Department of Sanitation in the District are doing is the proper thing to do. So, of course, my words are not going to have much effect on this. But I wish this committee would give very serious thought to the District Sanitation's report in comparison to the report from the gentleman from Wisconsin. And maybe they both have some good points.

Thank you.

MR. STEIN: Thank you, Mr. Alfandre.

Are there any comments or questions?

I guess you figured with all the houses you built -- I know you want a clean Potomac -- that you have produced it up to now.

MR. ALFANDRE: That is right.

MR. STEIN: You know, in listening to this, this really startled me. This was a time when I was much younger. And in those days they had these gals looking at the crystal ball. And one of these gals was running a seance, and in the midst of the seance someone rushed up from the audience and whacked the seeress right in the mouth.

Everyone was shocked at this, and they asked why she did that. And she said, "My mother always told me to strike a happy medium." (Laughter)

And, you know, here you are. You want to strike the happy medium I assume between pollution on one side and non-pollution on the other. We will do our best.

Are there any other comments or questions?

(No response.)

Does anyone else want to speak other than from Virginia?

(No response.)

If not, we will call on Mr. Paessler.

MR. PAESSLER: I am pleased to call on first Mrs. Jean Packard who represents the Federation of Citizens Associations in Fairfax County.

MRS. PACKARD: Mr. Paessler, might we reverse the position with the Conservation Council? Because one of our people is still missing.

MR. PAESSLER: In that case, we would like to call on Mrs. Nancy Brown of the Northern Virginia Conservation Council.

STATEMENT OF

MRS. NANCY L. BROWN,

NORTHERN VIRGINIA CONSERVATION COUNCIL

MRS. BROWN: Mr. Chairman and conferees, my name is Nancy Brown, and I am speaking for the Northern Virginia Conservation Council. Our membership includes individuals and organizations from Fairfax, Arlington, Prince William, Loudoun counties, the City of Alexandria and other neighboring towns and cities.

We appreciate the opportunity that these conference sessions provide for citizens and citizen organizations to offer their comments and recommendations.

During the conference proceedings in May 1969 there was a brief discussion regarding the inclusion of Prince William County in the conference area. Mr. Paessler said, at that time, "that it might be a good idea to leave this on a back burner to be considered as we move along and see what develops."

The Northern Virginia Conservation Council takes the position that developments have occurred which warrant a re-evaluation of this question and strongly urges the conferees to recommend, at the conclusion of this progress meeting, that Prince William County be included in the enforcement conference.

The conference area is referred to as the Washington metropolitan area and this by definition includes Prince William County, since they are a member of the Washington Metropolitan Council of Governments.

During 1957 when the first enforcement conference was called, the elected officials of the metropolitan communities had started meeting informally, and therefore the role of the Council in the region had not been established. However, COG has since moved to the forefront of regional significance and is the official reviewer of local government applications for certain Federal grant programs, including water and sewer facilities.

For this reason we feel that those political subdivisions participating in the Metropolitan Council of Governments should be identical to those that make up the Washington Metropolitan Area Potomac River Conference.

We also wish to point out that a line drawn at Hallowing Point establishes very high standards for the shoreline on one side of Mason's Neck, a major metropolitan open space and park area, and lesser standards on the opposite shore and embayment.

The total proposed Federal, State and Regional Park Authority holdings in this area are 5,639 acres. More than half of this acreage has been purchased and the balance is presently owned by the Nature Conservancy. We submit that this valuable and vital parkland should not be subjected to a double standard and dire consequences.

Nancy L. Brown

We are not unduly concerned. We have a report which deals with the quality of a public water supply presently serving 450,000 in the Northern Virginia area and located on Occoquan Creek, a tributary of the Potomac emptying into the embayment adjoining Mason's Neck. This study, prepared by Dr. Clair N. Sawyer of Metcalf & Eddy, Boston, Massachusetts, indicates to us that not only is the water supply endangered by sewage effluents, but that these pollutants are being transported downstream to the embayments and the Maryland waters of the Potomac River.

The report states, in part:

(1) That the sewage plant effluents in the watershed "are mainly responsible for the advanced stage of eutrophication occurring in Occoquan Reservoir" and that "this condition will become progressively worse as sewered populations increase."

(2) Detention time provided in the reservoir averages 12 to 26 days January through April.

(3) "Inflowing waters push existing water ahead of them and expel the oldest resident waters over the dam in plug flow fashion."

(4) "In view of the low critical flows that occur in all streams within the watershed, very little stream DO is available to satisfy the BOD of treated wastes. The streams therefore have virtually no assimilative capacities under design conditions. Because of this, tertiary treatment facilities are

necessary to achieve a maximum degree of BOD removal."

I would like to take the opportunity at this time to submit this study to you, Mr. Chairman, and request that it be made a part of the proceedings.

MR. STEIN: This will be in the record as an exhibit, without objection.

(The above-mentioned report, marked Exhibit No. 3, is on file at Hq. FWQA, Washington, D. C., and the Regional Office, Charlottesville, Virginia.)

MRS. BROWN: Thank you. In the Occoquan watershed there is an urban sewered population of approximately 50,000 people. Thirty-five thousand are connected to public systems, and the balance are served by private systems. There are a total of 36 plants discharging sewage effluent to Occoquan Creek. Two of the plants are achieving 93 percent BOD removal, and only one plant, Greater Manassas, has phosphate removal but is attaining only 85 percent BOD removal.

The political jurisdictions in this watershed have initiated steps to attempt a regional solution to this problem. However, in the interim, the allowable population established by the State Water Control Board is 90,000 with two stipulations: 1) "All new facilities must include nutrient removal processes in addition to secondary treatment" and 2) "parties discharging effluents shall recognize that, should eutrophification become apparent in the Occoquan impoundments, they shall be required to undertake additional measures to correct the situation."

The Northern Virginia Conservation Council does not feel that these controls are appropriate to the severity of the problem, and we request that Prince William County be included in the conference area so that the same high standards applicable above Hallowing Point be applicable to those sewage treatment plants discharging into our potable water supply as well as a tributary and embayment of the Potomac River.

Finally, we would like to point out that to date no study of the effects of siltation on the quality or quantity of water in the reservoir has been made. This information will be necessary to the long-range planning for future water resources in the Washington metropolitan area. Thank you.

MR. STEIN: Thank you, Mrs. Brown.

Are there any comments or questions?

I think it is the second page of your statement, Mrs. Brown, where you say, "The streams therefore have virtually no assimilative capacities under design conditions."

MRS. BROWN: Yes. That is a quote.

MR. STEIN: You say, "Because of this, tertiary treatment facilities are necessary to achieve a maximum degree of BOD removal."

I take it that you do not believe if they had assimilative capacity that you would want to use them all up?

MRS. BROWN: Right.

MR. STEIN: I hope Metcalf and Eddy would answer the same to that question.

Mr. Paessler.

MR. PAESSLER: Our next speaker will be Mr. J. Bruce Fisher, who has a statement and some slides to show I believe.

STATEMENT OF
J. BRUCE FISHER,
ANNANDALE, VIRGINIA

MR. FISHER: Mr. Chairman and conferees and attendees: It is a pleasure for me to be here. I am speaking on behalf of myself as a private citizen. I am a resident of Annandale, Virginia in Fairfax County, and I am going to talk on only the subject of soil erosion and silt in a very what seems to be micro-area that feeds the Accotink Creek which ultimately feeds into the Potomac which affects this conference area.

I am talking about Turkey Run, which is a 700-acre watershed. It is approximately two miles long and 3,000 feet wide. We are talking about the Turkey Run which dumps into the Potomac through the Accotink Creek about nine miles up from the Potomac River.

As has been pointed out many times in the conference in other proceedings before, the Accotink Creek is the sixth largest contributor of silt to the Potomac in the metropolitan area.

The conferees of the third session one year ago emphasized that the protection of water quality in river and estuary requires the continuing cooperation of all basin communities, landowners and official agencies, and also recommended that we adopt and enforce -- with underlines under "enforce" -- effective ordinances for control of soil erosion in the metropolitan area.

The area that I am talking about, very briefly, is here (indicating chart). It is probably difficult to see this. But in the upper right-hand corner is the Turkey Run watershed which drains down and empties into the Potomac River at Fort Belvoir.

There have been some statements made this morning about the developers trying to cooperate. Needless to say, what I am going to show you now will support or deny what these developers have said.

Could I have the lights?

(Following presentation with slides.)

This is a lake that is on the terminal end of Turkey Run. I happen to live on this lake -- one of ten owners. It is in a nice setting of dogwoods and --

MR. STEIN: Is that a chestnut fence?

MR. FISHER: Yes, sir.

J. B. Fisher

I have a little bit of "background noise" here to show you what kind of a situation we are in (playing recording during presentation of slide).

This is a 7-acre lake, complete with frogs in the springtime and birds singing.

We are gradually getting to a situation where, when we had it drained at one point not too long ago, we were able to note the 15,000 to 20,000 cubic yards of silt that have come down from upstream.

We are gradually going to lose this nice setting.

This is just a panorama around the lake itself showing the mud bottom as we had it drained not too long ago.

This is the discharge that goes into the last, say, 1,000 feet of Turkey Run before it runs into Accotink Creek.

This is going upstream now -- our first developer, Columbia Builders, just beginning to break ground in the end of February, beginning of March. They started to build a few silt dams. They looked something like this.

About three or four weeks later, the silt dams are all gone, and we have got potential siltation problems sitting right there on the edge. The stream is right in the foreground.

This shows some various clumps of dirt beginning to find their way into the stream itself.

Here on the Wakefield Chapel Road is soil erosion, taken during a rainstorm, showing it just peeling away and going into the gutter which ultimately runs into Turkey Run.

Here again is Columbia Builders.

A closeup of the erosion techniques they employ -- and discharging directly right through here right down into Turkey Run.

Our next developer, who is practicing excellent soil erosion capability and techniques, is Yeonas at Oakhill. This is taken during a rainstorm, and, in fact, the water is discharging down into the storm sewer with the material going with it.

This is Oakhill again on the side of Wakefield Chapel Road. This has been here for eight months, and you can see the different colors of silt as one has overlapped the other as it is coming down the side of this slope.

Here is my son. I will show you in a moment that culvert right down there, but it runs right straight ahead down into the Turkey Run.

Here is one taken just I think May 11.

This is May 16, a few days later. Another storm. This shows how the silt has filled up.

Here it comes -- nice, clean water draining off the land upstream, and as it discharges into Turkey Run.

And the confluence on the right. You can see it is not quite as silty as it is on the left, but it is still there.

This now is looking down a roadbed that was developed for a bridge. It has been this way also for about eight or nine months. It has worn a hole right through and down below into the tree area. You can see how it is finding its way into the Turkey Run area.

On the side of the bridge itself you can see how this silt is coming around.

This is looking down into the stream.

Again, around on another side of the culvert.

They had come out last March, and I had the Planning Commission from Fairfax County out there one Saturday morning. They were actually seeding, broadcast seeding, some seed. You can see the results of that on the right.

And, of course, construction filth, trash, waste, and so forth, find their way down.

These are from the piles of debris and dirt that they have moved, and again it has been this way for over eight or nine months.

Another developer, Gasner and Levine, probably have great plans to build great homes. It has been this way for eight or nine months.

Gasner and Levine. We see here settling ponds. This one was just recently dug. What will happen to that as it goes around and finds its way and breaks a hole in the dam itself and finds its way down from one pond to the next?

Again, on the right, it has broken the dam. That one is draining off to the right.

That is the Chapel Square Elementary School.

Another settling pond with the overflow pipe. The water apparently has not yet reached there, and yet it is flowing through like it has already gotten to the overflow point.

Some more of Gasner and Levine. And a breakthrough on the lower right-hand side of the dam that they put up.

Now we move up a little bit further. Again some construction in the upper right. You can see the silt finding its way down into the Turkey Run.

Now we are into the Truro subdivision, Miller and Smith, the ones who are going to develop our Burling tract. A little clean stream feeding from an area-- This is flowing down from Truro. Upstream is into the rear of the picture. And here is the confluence of these two feeder streams.

Another picture taken about three months later showing the same or similar situation.

And now we have the soil erosion practices here -- bales of straw to prevent apparently the large rocks and boulders, which we never worried about, coming downstream. We have not seen one of these yet.

And then three months later -- I took this last week -- the straw is very fertile as you can see. And now we have another little situation where Miller and Smith have said, in fact, that they are complying with all the regulations. This was taken last week.

It got so bad they had to cut a strip through their walkway down in the parkland to keep it from overflowing onto the walkway. Of course, the children came by here a little bit earlier, and they had to ford this stream to get across it.

Just a side view. Three months earlier it looked like this. It just flowed over the top of it, and apparently somebody complained. And this is where it is coming from.

Look at this pipe coming down there. Gee, it looks like there must be a settling pond on the other side of this with a standpipe in it so it will at least trap the boulders and the heavy sediment.

Looking down again just to give you the perspective into the stream in the rear.

On the inside, gee, there is not much water up there. The standpipe seems to be fairly clear of any water at all. The last mark on there is about halfway down. And yet the water is coming out the other end. There must be some engineering fault involved in the structure.

This is going back up a little bit further to try to trace where this "Red Sea" of mud is coming from as it washes away the area that Miller and Smith have made.

We have got our own Red Sea up at Turkey Run here.

Here is a silt dam just back of the sewer cap. The silt dam was very effective -- so effective it filled up with silt and is now a flood plain or a tidal flat that now the silt has to cut through to get down to the rest of the stream.

This is going back up further. Good construction practices are maintained here.

Around the corner, confluence again of a little bit of not so dirty with some red.

And right up here at the end of an already existing subdivision, Woods of Ilda. This I took three months ago in the car. It was raining that day. This is just to show it has not changed too much.

And off to the right at the end of another construction site the Planning Commission stood in full view of the situation and in effect said, "You've got a problem."

These are pictures taken 3 months ago showing some straw bales placed around the piles of excavations there. A few of them were not put in place, and obviously it went straight through.

Last week I took this one. You can hardly see this bale of straw right over here, but there are a few showing up over there. They just completely overrun the straw and have not bothered to replace it.

This again was 3 months ago.

And here it is now just completely overrun, the silt finding its way down the slope right into the Turkey Run.

And, of course, after the construction is completed, everything is in apple-pie order. No more siltation. Storm sewers are clean.

That is the end of the slide presentation.

As a citizen, I found by chance that there is a Fairfax County ordinance, section 17-7, "Pollution of State Waters."

It says:

"It shall be unlawful for any person to discharge, deposit, or cause or allow to be discharged or deposited in any State waters of this county any waste, rubbish, trash, garbage, dirt, soil, or any matter causing or aiding pollution," etc.

I thought that this might be a little lever for me to try to invoke some action. So the first thing I did was call up the justice of the peace and asked him if I could file a complaint under section 17-7.

He said, "I don't know what that is. I will have to dig it out."

MR. STEIN: Why didn't you ask him to get married? He would have been able to help you. (Laughter)

MR. FISHER: He finally got it out. I said, "Now, stay with me for a minute, Justice. Is it unlawful if it says it shall be unlawful?"

And he agreed that it must be unlawful if it says it must be unlawful. And we started from there.

I finally had my 8 complaints filed. The Commonwealth Attorney is involved. The case will go before the Criminal Court Judge on the 11th of June. Mr. Horwatt, Commonwealth Attorney, is working hard to try to push this together.

At the same time I got in contact with the State Water Control Board, Mr. T. James Kempton of Front Royal, the area office, and Mr. Leatherland, who came down and went through the watershed with me. I am working closely with them. We are trying to work now as a team effort to involve the Fairfax County Department of County Development and the developers themselves, the State Water Control Board, and, of course, the Commonwealth Attorney, and myself, in a team effort, myself representing the citizens for Turkey Run, in an effort to try to make amends, if you will, and stop the siltation that is taking place.

In Truro, of course, Miller and Smith have come out with very fancy ads over the past few months. One is entitled "A special kind of ecology, where homes that nestle among the trees blend with the curves and contours of the rolling land and overlook an unspoiled countryside."

They also talk about the "trees still reach to the sky, wildflowers pop up in the spring, the creek's clear waters flow," etc., etc.

I believe in all honesty that the citizens of any area have got to become more involved. They have got to become knowledgeable of how they can react legally and officially to what takes place around them.

In a nutshell, I endorse the findings of the Community Action Guidebook for Soil Erosion and Sediment Control, put out by the National Association of Counties Research Foundation under a grant from the Federal Water Quality Administration.

They may overplay a few things. They hold up Fairfax County as a model in sedimentation control. They said compared to the others it is a model.

Thank you very much, Mr. Chairman.

MR. STEIN: Thank you, Mr. Fisher. I am really grateful to you for taking me on a picture tour of my neighborhood. I can scarcely get back to mow the lawn these days.

You know, about 15 years ago or so, when Jean Packard and I first moved out there, we could walk over that area like it was country.

MRS. PACKARD: And listen to the whippoorwills.

MR. STEIN: That is right. And look at it now.

Are there any other comments or questions?

(No response.)

Audrey Moore

MR. PAESSLER: I would like now to call on Mrs. Audrey Moore.

STATEMENT OF
MRS. AUDREY MOORE,
ANNANDALE, VIRGINIA

MRS. MOORE: My name is Mrs. Audrey Moore. I am a housewife from Annandale, Virginia.

The people I know in Annandale, like Mr. Fisher, are concerned about clean water, particularly their drinking water. And so I came here today to tell you a story. I will try to make it a short story, Mr. Stein, but it is not a very nice story.

And I suppose as much as anything else it concerns man's inhumanity to man in the old Biblical sense of greed and sloth and the eutrophication of a public drinking water supply -- the greed of a few who for their own gain and, I believe the record shows, with the full knowledge of what they were doing, polluted this water supply while the rest of the people sat on their hands with the old idea that, you know, you can have freedom without responsibility, that the will of the people will maintain while you are not paying attention, and with, as a result, the lack of responsible concern on the part of our generation for the future for a need so basic as drinking water.

Audrey Moore

The Occoquan reservoir is located between Prince William and Fairfax counties and empties into the Potomac just below Hallowing Point. It presently serves 450,000 people, primarily in Alexandria and Fairfax County and I am told has a capacity to serve 750,000 people, although I am not sure of that anymore because I have been told informally and off the record that the limited development that has taken place in the basin has already created 5 feet of silt on the bottom of the reservoir.

Dr. Clair Sawyer of Metcalf and Eddy has recently released his findings on the water supply, and he says the water quality is seriously degraded, it is eutrophied, that down by the dam where it is deepest last summer there were only 10 feet of water which could be used to withdraw drinking water, that the water underneath is anaerobic, that it smells, that it is full of hydrogen sulfide, and when they take it out under the dam to release it, it smells so bad that you cannot even stay within 400 yards of it.

This did not come as a terrible shock to some of us in Fairfax County who have been fighting the pollution of that reservoir.

Well, how did it happen? Well, I won't go into a long blow-by-blow account of it. Up until the late 1950's the Occoquan Basin was a rural area. There were farms. There was agriculture runoff. There were some algae in the reservoir.

But then, you know, in the early 1960's, some highways were built -- Route 66 -- and Route 29-211 was widened. And you know how it says in the ads. It is 20 minutes to downtown Washington. And some of the entrepreneurs in Fairfax County and I guess Prince William County, the landowners, looked around and said to themselves, "Aha, there's gold in them thar subdivisions."

And you cannot have subdivisions without sewage treatment plant permits. So they went to see the State Water Control Board. And the State Water Control Board said, "Okay."

And then in 1963 the State Health Department sent a letter to the State Water Control Board, and they said, "Now, wait a minute. You have approved sewage treatment plant permits for 50,000 people. That is 5 million gallons a day of sewage effluent. It is not all connected, but when it is there are instances in the literature where the water quality of a lake or a reservoir has been destroyed by that amount of sewage effluent. And once the water quality of a lake or a reservoir has been destroyed, it is difficult if not impossible to restore it."

So the Water Control Board said, "Okay. We will put a moratorium on."

But that did not set too well with some of our entrepreneurs in Fairfax County and I guess Prince William County, and they formed a committee, an Occoquan Committee, and they got themselves a consultant, Mr. Klegerman of Alexander Potter

Associates, who is a good consultant on sewerage for Fairfax County -- although, God help him, I guess he is not too proud of it and doesn't appreciate the publicity today what with the fact that every sewage treatment plant in Fairfax County is apparently overloaded.

I am hearing now that maybe the sewers are overloaded too.

Mr. Klegerman went to the State Water Control Board, and he said, "Well, nobody really knows the quality of the water in that reservoir. But let's add 25,000 people. That is 2.5 million gallons a day of sewage effluent. And let's just see what happens."

And so the State Water Control Board said, "Okay."

But then they didn't do anything about it, and I don't know, but I suspect that the reason they didn't do anything about it was because they suspected or maybe they knew what would happen when they added that amount of sewage effluent.

Everything went along until January of 1968, when I guess the pressures had built up, and the State Water Control Board held a meeting down in Richmond to decide what to do.

It was kind of interesting. In Fairfax County, our good County Executive, Mr. Carlton Massey, got together with Mr. Klegerman, and they prepared a statement for our new Board of Supervisors, who were barely there long enough to warm their seats, to give to the State Water Control Board.

It was interesting because the day before there was an article in the RICHMOND TIMES-DISPATCH that said that the State Water Control Board did not believe that the Water Control Board would issue these permits until a two-year study on water quality in the reservoir was completed.

Fairfax County went down to that meeting and said, "Let us have sewage treatment plant permits, please. Let us have permission to pollute the water supply. Because, you see, we are going to take care of the problem. And the faster you give us sewage treatment plant permits, the faster we will take care of it, not only for us but for everybody else."

So the State Water Control Board issued the permits. And, interestingly enough, they issued permits for not 75,000, which is 50,000 and 25,000 but for 91,000. I guess somebody down at the State Water Control Board had a little trouble with their arithmetic.

It was after that that the Fairfax County citizens got into the act and went to our Fairfax County Board of Supervisors, and we said, "Now, look. There is a study going on on the water quality of the reservoir, and why don't we hold up on the issuance of these sewage treatment plant permits until the study is completed? And, ye gods and little fishes, we just bought that water supply 4 months ago. We took over the Alexandria Water Company and issued bonds for $55 million. So please don't issue those permits, and please go back to the State Water Control Board and tell them you didn't mean what you said, and don't issue permits to the other jurisdictions."

Fairfax County Board of Supervisors couldn't hear us. So we went to the Fairfax County Water Authority, and we said, "Look, you convinced us we should take over the Alexandria Water Company and buy this reservoir. Now, don't you think we ought to wait before we pollute it anymore until we have had the study?"

And the Fairfax County Water Authority said, "No, we have no objection to the putting into the reservoir of this additional sewage effluent."

Two nights ago, down in Manassas, there was a meeting of a lot of people that could do something about the pollution of our reservoir. It was called by the Northern Virginia Regional Planning District. The Chairman of the Fairfax County Water Authority was there, Mr. Fred Morin. There were people there from the other jurisdiction. The staff was there from the State Water Control Board.

And there was a man there by the name of Mr. Eugene Davis, who was recommending a program for the Occoquan Basin. And what he is saying is, "Let's all get together, and we will build sewage treatment plants, and we will put the effluent into the streams going into the Occoquan. It is secondary during the whole year except the summertime. And then we will build an elaborate program of sewers going down Neabsco Creek to the Potomac River."

Audrey Moore

I asked Mr. Davis if in his study, which came to $300,000 I understand, he had taken into account the need for water supply not only for us but for the region, if he had taken into account siltation and erosion problems.

And he said no, that actually his proposal was one to channel the sewage effluent out of the basin and a program for development for 800,000 people.

A little later on, some of the men at the meeting discussed with him the problem of the reservoir, and he said, well, actually as far as the program was concerned for the basin the reservoir was one of the least of the considerations.

I spoke to one of the staff of the Northern Virginia Regional Planning District about water supply and the concern for the reservoir, and he said, "I think that is up to the Fairfax County Water Authority."

So Mr. Morin was standing right near me, and I went to him, and I said, "Mr. Morin, I understand that the Fairfax County Board two and a half weeks ago directed you to respond to a letter of the Northern Virginia Conservation Council asking for a moratorium on sewage effluent between what is going in right now and what the Water Control Board has allowed, which would come to some 4 million gallons, and you were supposed to respond to that on Wednesday. And did you?"

And he said, "No, I didn't get the letter. I haven't done anything about it. We haven't done anything about it."

But he said, "You know, I am concerned about the reservoir, but you must understand that the long-range solution is the Potomac."

It was kind of an interesting meeting. Have you ever been with a group of people where you kind of felt that nobody's feet were on the ground? This was the feeling I had -- that these people in this room were sitting up there someplace, you know, not subject to the laws of ecology or nature, but it was like something unreal.

The main concern of the people in that room representing the other jurisdictions except Fairfax was how they could develop -- and cheaper than what Mr. Davis had suggested.

There was a man though whose name was Costello, and I will never forget him. He is Mayor of Mannassas Park. And he spoke up somewhere along the way, and he said, "Look, you know, maybe we ought to put a moratorium on that 4 million gallons a day."

And one of the men on the staff of the State Water Control Board said, well, the staff felt that they had a moral obligation on those sewer taps.

And I got to wondering who represents the people. Who speaks for the future?

I spoke to Mr. Singleton, the representative of the

State Water Control Board for Northern Virginia, two weeks ago, and I asked him, "Will the State Water Control Board, in view of what Dr. Sawyer had said about the condition of the water supply, ask for a moratorium until we could do something about the condition?"

He said, "I think that's up to Fairfax County to ask for it."

I have spoken to some of the members of the Fairfax County Board, and they say, "That is not our job, you see. The State Water Control Board is responsible for water quality."

There was an interesting article in today's paper. I don't know anything more about it except what is in the paper. But according to it, Judge Perry Thornton, who is a judge at our Fairfax County Circuit Court, has ruled that the county cannot withhold sewer connections because a body of water where the sewage will go in is polluted.

I do not believe in Federal intervention. I believe if we are ever going to get government of the people, by the people, and for the people, we have to make local and State government work. As a resident of Annandale, Virginia, I stand here ashamed to say that from the officially elected representatives of our State and local bodies and appointed officials I do not see any help coming. And now it doesn't look like it is coming from the courts.

And so I would respectfully like to suggest that if

Dr. Sawyer is right and that water really does smell so bad and is so evil coming out of the dam going down into the embayment, into the river, perhaps the water from our water supply is not doing the Potomac River any good.

I would like to further suggest that if this program for development for 800,000 people is carried out and the effluent treated as secondary and put into the river or into the Occoquan either at Neabsco Creek or Occoquan, it is not going to do the river any good.

I would respectfully like to request that this conference consider extending the river zone to take in Neabsco Creek where it empties into the Potomac or, at the very least, the area of the river where the Occoquan empties into.

Thank you.

MR. STEIN: Thank you, Audrey.

You know, I think here we have the essence of the problem. I never thought Audrey Moore was guilty of an understatement, but at the start she said, "I am Audrey Moore, a housewife." (Laughter)

I just put this to you. I am going to be personal about this in a way. And you talk about priorities. Where the fundamental operation in our society is that Audrey Moore, Jean Packard, or Anne Stein are going to spend their careers as housewives, I wonder whether we are putting our full talent into cleaning up the environment.

Bless you, Audrey.

MRS. MOORE: Thank you.

MR. STEIN: Are there any comments?

MR. HOPE: May I ask one question? It seems to me there was a notable lack of participation by either the State or the local health agencies in facing up to this problem.

MRS. MOORE: As a matter of fact, in 1963 the State Health Department did enter into it, and Mr. Eugene Meredith was the one who took the action. I would like to meet that man. I think he is pretty wonderful.

MR. HOPE: But he has not been involved more recently, and Mr. Meredith is still in Richmond and available to help out on the problem.

MRS. MOORE: Right.

MR. HOPE: I just wonder why they have not been brought in.

MRS. MOORE: Maybe Mr. Paessler could explain that to you.

MR. HOPE: Very good.

MR. PAESSLER: First of all, I would like to say if I am going to be excoriated by someone I would like for it to be Audrey Moore. (Laughter)

I heard the FWPCA or the FWQCA --

MR. STEIN: You are getting closer all the time. (Laughter)

MR. PAESSLER: That is what I think we are trying to do on this whole problem here, and I hope that we are having more success than I am. (Laughter)

Well, as a matter of fact, the State Department of Health approves plans for sewage plant treatment as a part of the review process for the Water Control Board. And the State Department of Health, of course, has approved all of the plans for the sewage treatment that is going in.

MR. HOPE: I withdraw the question. (Laughter)

MR. PAESSLER: And the Health Department, of course, has a dual responsibility here, and I do not think it has been entirely the Health Department that has been concerned about the reservoir. I think the Water Control Board is duly concerned about this.

It would take somebody with a talent for story-telling equally as good as my predecessor here, and I do not think that there is time this afternoon to sit down and talk about some of the ramifications of this.

I do not believe the situation on the Occoquan with respect to the future is as bleak as has been painted here, and I think that a plan has been presented for the disposal of sewage in the Occoquan that is going to protect the reservoir.

When all of the elements of that plan or one equally as good are carried out, I think the reservoir is going to be protected and the water supply is going to be protected.

But I would have to say that categorically at this time without going into a detailed explanation of all of the comments that have been made here today.

I have not answered the question. I have not really touched on it. But that is about all I can say at the moment.

MR. STEIN: Are there any other comments or questions?

Mr. Johnson.

MR. JOHNSON: Mr. Chairman, I would like to merely point out that some of these things Mrs. Moore has discussed this afternoon are pretty closely related to Article 9 of the proposed Federal Interstate Compact. As I think most of you know, Article 9 has been a very controversial portion in this compact. Unless there is attention given to it in the next year or two, if and when the new compact is adopted, you are liable to wake up and find out that Article 9 is not in there.

So I think that Mrs. Moore has pointed to some needs for Article 9.

MR. STEIN: Are there any other comments or questions?

(No response.)

Thank you very much, Mrs. Moore.

MRS. MOORE: Thank you.

MR. STEIN: Mr. Paessler.

MR. PAESSLER: I will now call on Mrs. Jean Packard of the Citizens Associations.

STATEMENT OF

MRS. JEAN PACKARD,

FAIRFAX COUNTY FEDERATION

OF CITIZENS ASSOCIATIONS

MRS. PACKARD: I may never forgive you, Mr. Paessler. I don't know of a harder act to follow than Audrey Moore. (Laughter)

I am Jean Packard, President of the Fairfax County Federation of Citizens Associations, and I have the rather enviable job of merely introducing people who know a great deal more of the subject than I do.

Our federation is a countywide organization made up of approximately 150 civic associations representing between 30,000 and 50,000 residents of Fairfax County. We have been deeply involved in the problems of sewage treatment capacity, capabilities of Fairfax County, and would like to make a brief summary of our findings to you today.

I would like to digress just momentarily to say that Mr. Fisher's presentation of the siltation, which is in my neighborhood as well, was doubly frustrating to me because I devoted almost a full year of my life with the League of Women Voters to get passed in Fairfax County a siltation and sedimentation control ordinance. We got that ordinance in 1966, and I used a slide presentation with pictures exactly like Mr. Fisher's in 1966 to get the doggone ordinance passed.

And here it is 1970, and we are still using the same pictures to show the same problems.

So it is not just the ordinance itself. It is the enforcement. And that is where we are lacking.

Miller and Smith, one of the defendants in Mr. Fisher's case, has just presented a beautiful plan to the Fairfax County Board of Supervisors with a model conservation and soil erosion ordinance on a very steep-slope site where they want to build 300 homes. This is a flat site. I would hate to see what they are going to do to the Potomac River if that is permitted.

Back to our presentation, I have three people here who have been very hard-working committee members for the Federation, each of whom is going to take a portion of our presentation. I will outline very briefly what they will speak to you about.

The first one is Colonel William Houston who wishes to address the problems of the evaluation of the package plant proposal, a recommendation for establishing BOD poundage limitations in the river south to the Lower Potomac treatment plant or preferably to Neabsco plant in order to take care of the proposal for the Occoquan water supply, and, third, the discrepancy between the Dulles Interceptor allocation and the Blue Plains plant capacity.

Our second speaker will be Mr. Morris Glenn, an oceanographer, who will be speaking to stream data samplings, their failings, and our recommendations for improving them.

The third speaker will be our very notable chairman of our Planning and Zoning Committee, Mrs. Marilyn Klein, who will speak on the proposed Fairfax County programs that are deserving of Federal attention we feel -- on the location of the present and planned outfalls which at present maximize pollution and, second, the Alexandria-Fairfax County facility which will join a separate sanitary system to a combined storm and sanitary system.

Next, she will speak on overload hazards that are inherent in interjurisdictional facilities.

Next, pollution abatement -- yesterday and today.

And, next, the request for Federal involvement and concern to supplement the State effort in the current Fairfax County overload situation and the "show cause" hearing that will be held before the State Water Control Board on June 3, 1970.

With that I would like to introduce Colonel William Houston.

MR. STEIN: Mrs. Packard, before you go, I would like to indicate that I sit in these conferences all through the country, and I think I may be pardoned for some local pride.

You may disagree with what these people say, but I think I have to say without contradiction that my neighbors in Fairfax County are the most decorative witnesses we have throughout the country.

MRS. PACKARD: You are awfully good for the morale. (Laughter)

MR. STEIN: I will match you against any of these gals anywhere.

STATEMENT OF
WILLIAM A. HOUSTON,
FAIRFAX COUNTY FEDERATION OF CITIZENS ASSOCIATIONS

MR. HOUSTON: Mr. Chairman, my name is William A. Houston. I am speaking for the Fairfax County Federation of Citizens Associations. I have three brief comments to make for the record.

First, I note that Secretary Hickel's letter of May 17, 1970 to Dr. Solomon urges the conferees to consider a series of action recommendations developed by Professor Vinton Bacon to speed cleanup of the Potomac.

W. A. Houston

Among these is a proposal for the use of "advanced waste treatment package plants" as temporary solutions to be employed only until proper central treatment facilities are on stream to handle present overloads, and with the stipulation that the effluents from such package plants meet applicable water quality standards.

A news report of this recommendation in yesterday's WASHINGTON POST stated that the Washington Suburban Sanitary Commission engineers feel the portable plants do not produce adequate results.

While citizen groups do not always see eye to eye with the Washington Suburban Sanitary Commission, Mr. Chairman, in this instance we share their concern over this package plant recommendation. Our concern is prompted by the fact that Fairfax County is also now considering, as a temporary backup to at least its overloaded Little Hunting Creek plant, the addition of a prefabricated treatment plant with a rated capacity of 1.0 MGD at a cost of approximately $225,000.

Since Professor Bacon's proposal envisages a package plant with a removal capability of 95 percent BOD and suspended solids costing $1 million for a 1.0 MGD plant, we are fearful that the package plant that our county officials are considering would not, in fact, meet applicable water quality standards, and would thereby increase rather than abate pollution.

We are also fearful that Fairfax County would use such a temporary package plant as an excuse to relax its recently imposed, temporary and partial restrictions on building permits in the watersheds served by our overloaded treatment plants, even though the Little Hunting Creek plant is admittedly operating at a current overload of 0.7 to 0.8 MGD from the county's own figures. We would, therefore, urge that the conferees take a hard, close look at these various package plant proposals and lay down firm guidelines for their use if it appears economically feasible and feasible from a sanitary engineering point of view to use them at this point in time.

Secondly, I have a comment on the original conference recommendations of last May, which recommendations, as approved by the Secretary, imposed an absolute quantitative limitation on treatment plant effluents in terms of pounds of BOD, phosphorus and nitrogen between Key Bridge and Fort Foote with only percentage limitations imposed on those treatment plants discharging below Fort Foote.

Since last May, the following developments have occurred:

(1) The Piscataway plant is now programmed for more rapid expansion than was contemplated a year ago.

(2) Fairfax County is now actively considering a consultant's recommendation to pump over the sewage from the

watersheds now served by the Little Hunting Creek, Dogue Creek, and the two Fort Belvoir treatment plants to the county's Lower Potomac plant, with an enlarged capacity for that Lower Potomac plant.

(3) The counties of Fairfax, Prince William, Fauquier, and Loudoun, the Town of Manassas, and the Virginia State Water Control Board, are now actively considering another consultant's recommendation that a regional sewage treatment facility be constructed at Cockpit Point in Prince William County, with a 1985 capacity of 113 MGD and with a discharge point in the Neabsco Creek.

In view of the foregoing, we suggest that the conference should consider the necessity of imposing absolute quantitative effluent limitations on those portions of the river between Fort Foote and at least to Neabsco Creek, if not farther downstream.

In this connection, we endorse the recommendation submitted earlier in this session by the League of Women Voters and by the Northern Virginia Conservation Council to include Prince William County in the conference boundaries.

My third comment has to do with Professor Bacon's action recommendations on the thorny problems of the Blue Plains plant. To summarize briefly, as I understand it, Professor Bacon states that Blue Plains is now overloaded by 10 MGD, that 11 MGD of its flows are currently contributed by Virginia, that other rights to Blue Plains' capacity in the Dulles Interceptor include 42 MGD from Virginia areas, that no obligation exists under existing agreements for D. C. to overload its Blue Plains plant, that the sewage load from populations connected to Blue Plains will have to be reduced, and that the Blue Plains capacity should be retained at 240 MGD at least through 1980, if not beyond.

We find some difficulty in reconciling Professor Bacon's various statements and recommendations. If Blue Plains is to be held at 240 MGD and if it is presently receiving only 11 MGD from Virginia, how is it possible to accept an additional Virginia contribution in the future, amounting to 31 MGD under the Dulles Interceptor agreement, to say nothing of the WSSC rights? We would hope that the conferees can clarify for the public these apparent anomalies.

Thank you, Mr. Chairman.

MR. STEIN: Thank you.

You know, Mr. Houston, Mr. Bacon will be here tomorrow. It is hard to get used to that "Professor Bacon." I have known him for 25 years before he became a professor, which he has been for about six months.

But he is one of our experts in the field. If you want to get here tomorrow, you can ask him these questions.

MR. HOUSTON: Thank you, Mr. Chairman. I will be here tomorrow.

MR. STEIN: Are there any comments or questions?

(No response.)

Well, if Mr. Bacon has achieved nothing else, he has gotten the Virginia people together with the Washington Suburban Sanitary District, and that is something we have been trying to do for 15 or 20 years. I guess he is ahead on that.

Are there any other comments or questions?

(No response.)

If not, Mr. Paessler.

MR. PAESSLER: I believe there are two more witnesses for the Federation.

STATEMENT OF
MORRIS GLENN, FAIRFAX COUNTY
FEDERATION OF CITIZENS ASSOCIATIONS

MR. GLENN: My name is Morris Glenn. My statement is a part of the Fairfax County --

MR. STEIN: Pardon me, Mr. Glenn. Would you identify yourself by affiliation and title for the purpose of the record?

MR. GLENN: Yes. My title is a part of the Fairfax County Federation of Citizens Associations' Planning and Zoning Committee, and my presentation concerns the Fairfax County stream sampling problems.

MR. STEIN: Mr. Glenn, again, would you mind telling us who you are?

MR. GLENN: Yes. I am Morris Glenn.

MR. STEIN: But what is your title?

MR. GLENN: Title? Concerns of --

MR. STEIN: Whom are you representing?

MR. GLENN: I just went through it.

MR. STEIN: No, --

MR. GLENN: The Fairfax County Federation of Citizens Associations.

MR. STEIN: Are you the representative for those people?

MR. GLENN: No. I am a member of the Planning and Zoning Committee.

MR. STEIN: But you are speaking alone as a concerned citizen?

MR. GLENN: Right.

MRS. PACKARD: No, Mr. Chairman, he is part of our Federation presentation. We have three speakers.

MR. STEIN: And he is speaking for the Federation?

MRS. PACKARD: He is speaking as one of our Federation spokesmen.

MR. STEIN: Thank you.

MR. GLENN: Okay. Thank you.

By way of introduction, this is an infrared photograph (showing slide) of the Potomac River here in 1968 showing the Mount Vernon shoreline, Dogue Creek, Gunston Cove, and the bottom of Pohick Creek area where the new Lower Potomac plant is going into effect.

The colored floating masses in the river are nuisance algal blooms collecting in Gunston Cove and along the shoreline as just an indication of a pollution problem that exists in our area.

Thank you.

May I have the lights?

MR. STEIN: Did you make arrangements to do this?

MR. GLENN: Well, I'm sorry, but they came out rather spastically here.

By way of introduction, our committee has prepared this report at the request of the various intergovernmental agencies concerned with water quality in Fairfax County to initiate a coordinated and more meaningful stream sampling program.

We have found that present stream sampling data is inadequate to determine the degree of pollution that exists in our country.

This report also includes a discussion of the availability of these reports and our recommendations concerning their improvement.

M. Glenn

Stream sampling data for Fairfax County. Complaints from Mount Vernon area citizens' associations which are adjacent to the county sewage treatment plants caused our group to initiate this environmental investigation.

Beginning with the usual documentary letters concerning such problems as the nuisance odors from algal blooms, the unpleasant visual aspects of our polluted streams, and complaints from homeowners concerning sewage waste items washed into their backyards during periods of high water, this group decided that specific environmental data would be necessary to determine the degree of pollution.

Our first step was to request that the Federal Water Quality Administration provide us with any available water quality data and flow data for Pohick, Little Hunting, and Dogue Creeks.

Their response, enclosure A to this report, which has not yet been Xeroxed and is over in the other room and will be provided later, was in the form of a source map showing the existing water quality monitoring stations in Fairfax County and a list of parameters sampled.

These include all of the locations and many of the parameters we needed to document our study of stream pollution.

But upon requesting such station data from the Virginia Water Control Board, we were informed that Fairfax

County supplied this data to the Virginia Water Control Board from their network of over 45 stream sampling stations which, by the way, are not yet tied in to the State automated stream data network.

The Virginia Water Control Board has only taken occasional stream samples in Fairfax County since 1966. These were primarily designed to verify county data. The limited number of State visits to our area was probably caused by the common problem of lack of funds and a duplication of effort for our tax dollars.

But our committee was sent copies of the available station data sheets. From these reports, theVirginia Water Control Board reported to this writer that they were satisfied that no major problems existed in Fairfax County and that they were not initiating a regular series of stream observations.

The Fairfax County of Public Works, which took county stream sampling data, provided all of the copies requested by our committee on their stream sampling stations. These data have been collected since 1966 on a regular basis, and a fairly standardized sampling report has been followed.

Since the county had assigned only one chemist to make these tests, in addition to their regular test, the time required for these tests evidently made complete analysis of all samples difficult.

M. Glenn

As a result, tests concerning fecal coliform counts have not been performed and recorded on stream sampling reports currently available to this writer. But I understand that these tests have been made in the past.

Any stream sampling test performed in the future should include fecal coliform counts or, at the very least, should provide "most probable number results."

Also, this data has never been summarized or analyzed by the county because of the aforementioned lack of manpower. As a result, its value as an indicator of pollution in our county must be questioned.

The county should begin to add such tests as those which measure chlorophyll "a" for a measure of the standing crop of algae. Such indicator tests would provide a better measure of the pollution problems in our county.

Also, it should be noted that the county currently finds itself in the position of defending against charges that its sewage treatment plants are polluting the streams, and, at the same time, of providing the stream sampling reports to document this pollution.

But they should be complimented for providing us with this ammunition which we are throwing back at them.

Such a situation could prove to be embarrassing for our county government. Any future coordinated sampling program should provide for such problems as this.

The Fairfax County Health Department has begun a stream sampling program as of September 1969 which should help to solve the aforementioned problem if it is completed and if sufficient manpower is assigned to properly analyze the data.

It is obvious from the letter enclosed that the County Health Department did not anticipate that their data would be utilized for such a purpose. In fact, the letter seemed to indicate initially that such data was not available, but further communication with the Health Department revealed the existence of these test results.

Mr. Clayton of the Health Department indicated that the six months of data collected since September when the tests began would not provide a valid sample and that until a full year of data was available, he could not release the stream sampling data.

He was most helpful to this writer in allowing personal inspection of the Health Department stream sampling data and in explaining its significance. This information was not for publication purposes, but he extended it only as a service to a concerned citizen. But, after seeing the data, this writer feels that these reports should be distributed to all other government agencies concerned with water quality in Fairfax County, rather than existing as single-copy records of the

Fairfax County Health Department.

The Chesapeake Technical Support Laboratory of the Federal Water Quality Administration began chemical analysis of the water quality in the embayments along the Fairfax County Potomac shoreline in February of this year. This writer suggests that biological tests should be added to the fairly complete chemical analyses which are now currently performed by them.

In conclusion, it has been indicated that a large volume of data has been collected concerning the water quality in Fairfax County streams. But the following problems preclude the most effective use of this data.

1. Insufficient distribution or non-distribution of copies of pertinent reports to the concerned agencies.

2. The "collection orientation" of most all of Fairfax County stream sampling programs with no effort expended upon analysis as to their meaning or impact upon the local environment.

3. Lack of testing parameters in Fairfax County data designed to reveal the full impact of stream pollution.

4. Lack of a sufficient VWCB monitoring program to verify the Fairfax County data.

We must conclude that the most effective program would be one that provides for:

1. Some redundancy of sampling points for all agencies;
2. Delineation of areas of specific concern;
3. Definition of tests most indicative of nuisance pollution conditions;
4. Implementation of a data distribution system for all concerned agencies;
5. Provisions made for the most effective analyses of the data, and
6. Remedial and/or enforcement procedures defined where pollution problems are found to exist.

Thank you, Mr. Chairman.

MR. STEIN: Thank you.

Are there any comments or questions?

(No response.)

All right. I think you have a good report. But with all the work you have done, let me make some comments, because I think you are probably going to work on this in the future.

One, you can get the distribution by just Xeroxing and sending them to us.

Now, I am not sure about this word "parameters" -- lack of testing parameters. But presumably Virginia will have its standards out and hopefully approved by the Federal Government real soon, so we can check the standards and requirements of the data.

You talk about definition of tests most indicative of nuisance pollution conditions. I would suggest to you that this might be too late. The kind of tests we look for are the indicative conditions before they get to nuisance conditions.

I would suggest one other thing. As far as I can see, there is no data in this field which should not be available to the public. This business that it has to wait six months or a year before it comes out or otherwise it may be misinterpreted does not have much meaning to me. In other words, I do not see any information, in my experience, in Fairfax County or Virginia or any data that they have which is not immediately available. I am sure this is their policy. They will make anything they have in the worksheets available to everyone.

MR. GLENN: Well, Mr. Chairman, in answer to that, I think we pretty much caught the Public Health Department by surprise that day showing up requesting this information. A verbal request at that time was made for the release of this data. Since even such a request from a citizen was a new occurrence to the Public Health Department on a comparatively new program, Mr. Clayton said that such a release would have to be cleared from Mr. Kennedy, who is the head of that office.

MR. STEIN: Are there any other comments or questions?

(No response.)

If not, thank you very much.

We will stand recessed for 10 minutes.

MRS. PACKARD: Mr. Chairman, we have one more speaker.

MR. STEIN: Yes, I know.

(Whereupon, a recess was taken.)

MR. STEIN: Let's reconvene, please.

Go ahead, Mrs. Klein.

STATEMENT OF
MRS. MARILYN KLEIN,
FAIRFAX COUNTY FEDERATION OF CITIZENS ASSOCIATIONS

MRS. KLEIN: Mr. Chairman, for the record, I am Marilyn Klein. I am the third Federation speaker.

I am the chairman of the Planning and Zoning Committee of the Fairfax County Federation of Citizens Associations that has digressed very slightly from planning and zoning. It has been traipsing around the sewers of Fairfax County for 3 or 4 years. I feel like the Art Carney of Fairfax County. (Laughter)

At any rate, the points I am to touch on today are, number one, the proposed Fairfax County programs which we feel deserve Federal attention and consideration.

The first is the location of the present and planned outfalls, those which we have in existence now and those which will be very shortly activated at Lower Potomac.

We feel that at their present location, based upon information that we have, it maximizes the pollution impact rather than minimizes it.

For instance, the Fairfax County Dogue Creek treatment plant outfall presently empties into Dogue Bay, which is found to be similar to Piscataway Bay in relation to currents and mass transport of water.

The Piscataway data was collected and published by your own ChesapeakeTechnical Support Laboratory, and it supports the results that one of our county residents, a Mr. Merritt, also performed on the Dogue Bay some years ago which I believe has been updated more to the current condition.

Based upon these studies, we will note that the Dogue Creek outfall is in the embayment zone where the water is calculated to remain in the static impoundment for periods up to three weeks.

Obviously, this is what we mean when we say that the outfall lies in the zone where you will maximize the pollution effect from that outfall rather than minimize it.

Other county plant outfalls are located in similar or worse locations. Some of them are on streams or creeks rather than in bays. And in itself that is frequently a more hazardous situation.

As one of our county officials noted, Little Hunting Creek itself constitutes tertiary treatment. And we feel that there is a better use for our creeks and our streams and our bays than tertiary treatment.

The problem which we are outlining here will be particularly apparent when we consider our new Lower Potomac plant.

So because of the current proposal to close up the two plants, Dogue and Little Hunting, and to pump the effluent down to the Lower Potomac, and because of the fact that it is about to open, I would like to spend a little more time on the Lower Potomac outfall.

The Lower Potomac outfall lies a substantial distance upstream from Gunston Cove in Pohick Creek. According to our oceanographer, incidentally, it lies not enough upstream for the stream to purify itself after the effluent hits it. So it is a substantial distance from the cove but it is not far enough for the effluent to benefit from the distance.

Flow measurements in Pohick Creek conducted yesterday by myself and my oceanographer friend -- he merely pointed and said, "Now, carry it over there, now over there, and up yonder" -- indicates that the width of the creek is about 32 feet. Its depth ranges from four and a half to eight and a half inches throughout about two-thirds of its width, and from 0 to 4½ inches throughout the remaining 10 feet.

And, ladies and gentlemen, this is spring, and last Sunday we had 12 hours of rain.

Marilyn Klein

So the rate of flow that we calculated yesterday was about 24 MGD.

We are contemplating opening the Lower Potomac plant on July 1, and the expected flow will be slightly below 18 MGD.

Now, at 18 MGD, with 92 percent efficiency, Lower Potomac will be adding 75 percent to the stream's flow on a day like yesterday.

At second stage of the Lower Potomac plant, or 27 MGD, it will add 112 percent to the stream's flow at periods again like yesterday.

Fairfax County consultants are currently recommending immediate commencement of the second phase to make the 27 MGD available in May of 1972, to accommodate the flows from Dogue and Little Hunting Creeks, but tertiary treatment by the same consultant recommendation is not due until July of 1973.

Therefore, we voice the following concerns:

1. At 18 MGD, with 92 percent efficiency, over 2,400 additional pounds of BOD material will be added to a creek which yesterday measured 24 MGD, probably severely damaging the ecology.

2. At 27 MGD, with 92 percent efficiency again, over 3,600 pounds of BOD, additional pounds of BOD, will be added to the creek, and 14 months will intervene between the availability of this 27 MGD capacity and tertiary treatment.

Marilyn Klein

3. It is extremely questionable that tertiary's 96 percent removal will reverse the effect upon the stream because, of course, of the added capacity which will then be available.

Therefore, the Federal Government is recommending 2 immediate actions to our county, to the State, and to Federal agencies: that a cost and feasibility study immediately be initiated and the information obtained for (a) extension of the outfall to the mainstream of the Potomac, and (b) upgrading of the facility to the point that no adverse effects will occur to the stream and bay based upon detailed hydrological and ecological studies.

The second point that I am to comment upon today, under the programs which we feel are worthy of your attention which we are offering, is this:

In addition to the above points, we are concerned about the fact -- and, incidentally, also the haste -- that Fairfax County consultants, like Alexandria's consultants, are recommending a joint expansion of the Alexandria plant in spite of the fact that Alexandria has a combined storm-sanitary sewer system while Fairfax County has a separate one.

This is in spite of the fact that such a combined facility would be excused from pounds to the stream at times of storm flow.

It occurs to us that any such plan should not be approved unless there is a direct relationship required in which the city of Alexandria would abate its storm runoff, gallon per gallon, for any additional sewage that Fairfax County puts into that system.

The next point I would like to touch on is the overload hazards that we have found just using Fairfax County as an example that are inherent in interjurisdictional facilities. It is something that we feel is very worthy of Federal concern.

Here in Fairfax County we are constantly reminded by our present situation of these hazards which I am mentioning.

We have only to cite the Alexandria-Westgate system, wherein Fairfax County continually granted building permits to further overload Alexandria upward from its 18 MGD to -- what is it, Mr. Shafer? 29 or 33 or some such in the recent months? -- without Alexandria "blowing the whistle" on us, or to cite the Fairfax City and Fairfax County relationship whereby Requirement No. 1 was invoked against the city in 1965 to cause it to arrange treatment for anything over its design capacity of 2 MGD -- which the city, incidentally, arranged with Fairfax County.

Yet, today, in 1970, 5 years and much pollution later, Fairfax County has yet to process, as far as we know, one ounce of Fairfax City sewage. And the Fairfax City plant in February of 1970 processed 3.1 MGD, or 1.1 MGD over its design capacity, even with Requirement No. 1 having been invoked in 1965 and, to our knowledge, not lifted, although that point is uncertain.

The town of Vienna in Fairfax County seems to be taking a similar course in regard to sewer lines. We know of instances where manholes have been clamped shut and lagoons dug around the manholes to arrest the bubbling up of raw sewage. And this is a composite evil of sewage from both the town and the county building permit practices.

We call your attention to these facts because some way must be found to eliminate for all time such "see no evil, hear no evil, do no evil" practices which have these built-in buck-passing abilities, because we do have several jurisdictions involved.

The third point is pollution abatement, yesterday and today. In the past, with fewer people, the streams were in less critical condition and the term "pollution abatement" frequently implied the willingness of a jurisdiction to provide sewage treatment in the future. There is a tendency to extend this historical concept into today's situation, but the conditions which may have justified the earlier stand have changed drastically.

Today, there can be no substitution of a program for actual abatement. No more can we permit increasing pollution while we wait for correction. Fairfax County, and it seems the neighboring jurisdictions as well, if this morning's paper is correct, are all in the situation of having overloaded plants.

The building industry with its power and its organization and its effectiveness cries "disaster" and too frequently ignores the fact that it has really had a free ride during the period of time that the plants first reached their designed capacity to the present time when we are now considering stop actions.

We feel that this must stop now, at least temporarily. It must stop now if the health and safety and welfare of the people and the streams are to be protected.

Our State Water Control Board has shown concern and cooperation in recognizing and confronting the problem of Fairfax County's major treatment plants, all of which are overloaded, and they will reach their moment of decision on June 3 at the "show cause" hearing or certainly very shortly thereafter.

We request that the Federal Water Quality Administration similarly involve and concern itself with this problem. We ask that your support of our request for a temporary ban on additional impaction of these facilities until additional treatment capacity actually is available be added to ours, and we ask that you join with our common citizens in protecting our streams and our bays and our national river as well.

Thank you, Mr. Chairman.

MR. STEIN: Thank you, Mrs. Klein.

See how we do it in Fairfax? Mrs. Klein is a housewife also. She also has six children. And, you know, maternity is --

I guess that now "conservative" and "establishment" figure, Sigmund Freud only thought paternity was wonderful, but he said paternity was really a presumption based on supposition. (Laughter)

Any comments or questions?

(No response.)

If not, thank you very much.

Do you have any more witnesses?

MR. PAESSLER: That concludes it.

MR. STEIN: May we have Mr. Sims?

STATEMENT OF
IVAN H. SIMS,
THE IZAAK WALTON LEAGUE OF AMERICA

MR. STEIN: All right. Would you go ahead, Mr. Sims?

MR. SIMS: Mr. Chairman, I tell you those Virginia housewives are a hard act to follow. (Laughter)

I am Ivan H. Sims, a resident of Bethesda, Maryland and chairman of the Izaak Walton League's Inter-Divisional Committee on the Potomac River Basin.

The committee was established several years ago by our representatives from Maryland, Virginia, Pennsylvania and West Virginia to analyze the Potomac Basin Compact, which we ultimately supported, and to give expression to our concerns for this Nation's river.

In addition, my testimony here today represents the position of our national organization as well as being a reflection of the views of our large membership in the Washington metropolitan area.

Mr. Chairman, we were pleased to participate in the convening of this enforcement conference last April. We stated at that time that the standards adopted for the Potomac River were, in our view, realistic, responsive to the needs of the people of the region, and entirely attainable in the light of present attitudes, conditions and technology.

The League also emphasized that if these goals were going to be reached, each of the jurisdictions had to assume their fair share of the costs, inconveniences, and hardships if necessary, to return the water as they received it, or better.

From newspaper accounts and private inquiries, it seems apparent that there has been a difference of opinion this past year over what should be done and by whom to reach the goal of clean water for the Potomac. And without conjuring up what we hope will now be old controversies, I would like to comment on this briefly.

In our view, the State of Maryland and many other States had a legitimate grievance when the Federal Government over a period of years since 1966 reneged on its commitments to provide adequate treatment plant grant funds under the Clean Water Restoration Act.

MR. STEIN: When did we renege on that?

MR. SIMS: When we got only 214 MGD 2 years ago, wasn't it, under the Johnson Administration.

MR. STEIN: When do you ever assume that an authorization is an appropriation? If you are going to keep that stuff up, we are never going to get anywhere.

There was no reneging. There was an authorization, but there was not an appropriation. Now, if all the money were appropriated in the Federal budget that was authorized, you would be surprised what the budget was.

As long as you people in the Izaak Walton League come along with stuff about reneging, I suggest you look at the basic constitution, the authorization of the Federal statutes. We are just not going to get anywhere if you keep talking that way.

MR. SIMS: Mr. Chairman, I put in 36 years with the Federal Government. I know a little bit about how it operates.

MR. STEIN: I hope you do. Now, tell me --

MR. SIMS: I do.

MR. STEIN: Tell me where they reneged when there was an authorization and the money was not appropriated? It is not automatic. The reason they have appropriations committees is to consider what the authorization is.

As long as we talk about this nonsense of reneging that the Izaak Walton League talks about, we are not dealing with this realistically.

Now, darn it, we have enough trouble with the polluters without getting people who should know better who misinterpret when they absolutely know how the Federal Government works, how State Government works.

This is utter, utter nonsense, and I am just getting tired of hearing this repeated again and again.

MR. SIMS: You're getting tired?

MR. STEIN: Darned right I'm getting tired. And if you want to understand why the rivers are not being cleaned up, maybe the first answer is that you had better understand the way the governmental process works.

MR. SIMS: I think we do. I think we have been over that here several times before.

But the League and other public service organizations, however, helped to solve this problem of the discrepancy between authorizations and appropriations in part last year when it participated in the Citizens Crusade for Clean Water which led to an $800 million appropriation for fiscal year 1970.

We are once again involved in a similar effort to appropriate the authorized $1.25 billion based on the judgment that the new legislation and new financing plans are not likely to be enacted and made operable in fiscal year 1971.

And the point is this: At a time when the Administration and the Congress, at public urgings, are trying to solve the treatment plant financing problem, the States and local governments would be ill-advised to raise past history in resisting engineering and technical recommendations which will get the job done.

In the Washington metropolitan area, such objections seem particularly inappropriate. Montgomery County, for instance, has just now recognized that "urban sprawl" is at the heart of its public service problems just as it is in Fairbax County across the river. The answer to this is better planning, and the assessment of the costs of public services directly to those who enjoy the benefits of accelerated growth. Shipping our problems and wastes in greater and greater amounts to other jurisdictions will only take us down a dead-end road as populations in both jurisdictions increase.

We believe, for instance, that Maryland citizens take a very dim view of having additional wasteloads from the new suburbs piped over to Blue Plains where it is inadequately treated and dumped to the degradation of their river -- Maryland's river.

What is more, we do not believe Maryland should put the blame for this on someone else. In a letter dated February 9, 1970, for example, the Maryland State Department of Natural

Resources advised the Secretary of the Interior:

> "The waters of their county, Prince George's, are heavily damaged by pollution coming from the District. Furthermore, the State of Maryland is requiring a very high level of treatment. Thus the people in Prince George's County will be paying the price for clean water, but they are not getting it in the Potomac for lack of improvements at the Blue Plains Plant."

This letter prefers to ignore the fact that the sewage which is overloading Blue Plains and which is damaging Prince George's County is coming in part from Montgomery County upstream. Furthermore, we are somewhat concerned that expansion of Blue Plains is being insisted on as the answer to the exclusion of other alternative engineering and technical solutions.

Mr. Chairman, we have reviewed the general recommendations now being made by the Federal Water Quality Administration. In the main, except for some questions concerning No. 3, they appear to be sound, and regardless as to how or when they came about, as of May 21, 1970 they appear to be responsive to several recommendations which the League made a year ago:

1. That the treatment facilities in the Potomac Basin should be upgraded to tertiary treatment. We believe our water supply and recreation needs require this.

2. That the Potomac River should not be landfilled to

accommodate further expansion of the Blue Plains plant as long as other effective alternative exist.

3. That the suburban counties must face their problem of accelerated growth and its impact on our water resources. Ultimately, we would like to see a fully-integrated regional treatment system for the entire Washington metropolitan area. The development of such a system, given the population projections in all of the jurisdictions, requires that existing facilities not be further overtaxed and that additional sites be found and acquired well in advance of actual need.

I would like to digress from what you have in hand for a moment to express appreciation of Mr. Keeney's concern when this report by Mr. Bacon was tossed into his lap. I can well imagine that the County Council in Montgomery sort of feels like they have got a bomb in their lap with the thing ticking off.

And this is a pretty drastic change, of course, as Mr. Keeney pointed out. I think if it is thrust upon the county without further county consideration, it really could be quite disastrous.

Mr. Chairman, we wish that this could be the last session of the enforcement conference people in the Washington metropolitan area, particularly in the District where needs are greatest, we will take an increasingly dim view of anything or anyone who impedes progress in the cleanup of this river.

It is time to agree on a plan and to work cooperatively to implement it.

And here I am reminded a little bit of what happened some years ago when a friend of mine first saw a cubistic painting. He said, "Well, it's pretty, but is it art?"

And sometimes I am wondering. This is a fine conference, but is it an enforcement conference? I hope it becomes so very shortly.

Thank you.

MR. STEIN: Any other comments or questions?

Yes. Go ahead.

MR. COULTER: I have just one. Mr. Sims, in the Izaak Walton League endorsing the recommendations made by FQA -- I mean FWQA --

MR. PAESSLER: I guess I'm not the only one having trouble. (Laughter)

MR. COULTER: -- do you mean by that the recommendations which we heard that were made by the supplement this morning?

MR. SIMS: In general. But we are not too happy about this temporary treatment plant thing.

I am reminded of the duration of the temporary buildings down on Constitution Avenue.

MR. COULTER: I have some of those same reservations.

What I would really like to know -- and perhaps the

League can think this over and answer later if you don't want to answer now -- is this:

For many, many years, almost 55 years if memory serves me correctly, there has been a "no effluent" policy with respect to the Washington metropolitan area. And that policy discouraged the building of a sewage treatment plant above the District line and especially above the District water supply plant.

It was with that policy in mind, and a number of other pronouncements from Congress, that the Blue Plains Interceptor sewer was built and the concept of the Blue Plains plant serving the Washington suburban area, especially Prince George's -- or Montgomery County -- came about.

Now, under this new policy which we heard today, that I do not profess to understand yet, it would seem to me almost a necessity for construction of sewage treatment plants that would discharge above the District into the Great Falls area and perhaps into the water supply of the metropolitan area.

Do I understand that the Izaak Walton League would withdraw any opposition that they once had to such a scheme and would not look with disfavor upon the location of sewage treatment plants up there?

MR. SIMS: I would think, Mr. Coulter, that this would hinge upon the quality of the effluent.

Three or four years ago we very decisively defeated a proposal for the establishment of a city of 30,000 people up at Poolsville because we were not convinced that the treatment plant plans were suitable or would be effective in protecting the intake at Watts Branch. And I think this would still be our position.

We have got to be convinced that the effluent is of a water quality which will not degrade the river that receives it. Can you give us that assurance when the time comes, do you think? We will ask for it.

MR. COULTER: I am sure you will.

MR. STEIN: Why don't you write them, Mr. Sims?

Are there any further questions or comments?

By the way, I think your statement is excellent, Mr. Sims. Really.

You asked one question though. And, by the way, I thoroughly agree with you in all the points you make at the end in your recommendations and your answer to the last question. I am sure this is the question we are facing here, and I ask you all to look at this.

When we were here in the 1950's, we were talking in terms of an 80 percent reduction of BOD. We did not believe, and I don't think anyone believed, that that kind of effluent should be discharged above a water supply.

MR. SIMS: Yes.

MR. STEIN: However, now we are talking in terms of 96, 96 percent reduction in BOD, phosphates, nitrates, really talking about drinking water quality.

With those assurances, I think we may have to rethink it.

However, on this notion that this will be the last session or the last session of the enforcement conference --

MR. SIMS: I say we hope.

MR. STEIN: Oh, "we hope"?

MR. SIMS: We hope it could be.

MR. STEIN: Now, I hope that too. However, let's just think this through.

We heard Mr. Keeney this morning, and I recognize his problems. I recognize the problems he puts forth. I think though we have to look at this just fairly and squarely.

I made these recommendations a year ago on Blue Plains. As far as I can see, we have no agreed-upon program that I can see right now where we can see the end of the tunnel for Blue Plains to meet the requirements of the conference the last time out, let alone the renewed recommendations we have here.

We came up with the proposition where the District wanted 50 acres or so of fill, to fill in the Potomac, and that

I. H. Sims

was not forthcoming. I have not seen an alternative.

I would like to see this conference concluded as rapidly as possible. But until an alternative comes, we don't have it. We cannot conclude it until the river is clean.

I think we have had moves forward in the Piscataway plant. We do not have plans in yet for reduction of the phosphates or nitrates. Until that comes and that is in effect, we cannot conclude the conference.

We have had indications from Virginia that they are going to comply. Until we get specifics and we see these plants built and in operation, we cannot conclude this.

It is a very easy thing to do to point to the Federal Government and say we should conclude it. We would be the first ones -- or I would be the first one -- to recommend calling this off and going on to something else. But we have an obligation to see that they put in the treatment works -- not only promise them but put them in, put them in in a reasonable time and begin operating them, before we can call this off.

I will say to you -- and this may be a regret to a lot of people as to how long we are going to have this -- as long as this river is not being cleaned up, the Federal Government is obliged to take some kind of action. Now, it may not always be in the conference stage, but we cannot stop this until they have cleaned up the river.

MR. SIMS: Well, I think our viewpoint there, Mr. Chairman was that we hoped that we could get enough progress in cleaning up the river so we would finally be through with the enforcement.

MR. STEIN: If you agree with the view of Mr. Keeney of the Montgomery Council, he indicates according to his view that he is presented with a curve ball and they have to reverse themselves because they fully intended to pipe all their waste or a majority of their waste to the District, all to be treated at Blue Plains.

If you sympathize with that, I think you can figure that if this view prevails, we are going to have many, many more of these sessions.

Because until we resolve it, we are not going to have a clean river.

MR. SIMS: Well, with this new thought about the regional system of plants and a limitation on the expansion of Blue Plains, I am afraid you are right. We are not about to achieve --

MR. STEIN: That is right.

MR. SIMS: -- concensus on what the new system shall be and go from there into a matter of enforcing of the newly adopted system.

MR. STEIN: Right.

By the way, let me say this. I think your analysis is as perceptive really as I have seen in any one of the programs. And I understand just reading your analysis that you are aware of this. But unless we can arrive at an agreement here on the program for a cleanup -- and I am not sure that we are that close together -- you can expect many more sessions, even though we both hope that this will be the last session.

But maybe we will get a change of heart by tomorrow morning, but I am not sure that we are going to be in line.

Let me make one last point. With all the proposals we have had since the 1950 conferences, as far as I am concerned, we do not have the financing available now or the plan available now for the Blue Plains plant if the District of Columbia is going to meet our water quality standards. And the reason we have had this conference over the years and we have had to keep it going for 13 or 15 years is that the Blue Plains plant has never met the water quality standards and requirements we have established in the 1950's.

This is very sad to relate. But you can look at this river and you can see where this pollution comes from.

I sympathize with the District. If they are just going to keep taking the wastes from Virginia and Maryland, they have got a severe problem. But we have never cleaned up this river yet.

MR. SIMS: Well, Mr. Chairman, I appreciate what we have been doing, because I first got involved in this pollution business in the Washington metropolitan area in the late 1930's, about 1938 or 1939. This was shortly after or just about the time that the primary treatment plant was first built in the District.

I was assigned to Washington in 1934 when there was no treatment. And we have been -- I say "we" -- the Bethesda-Chevy Chase Chapter of the Izaak Walton League -- pressing first for primary treatment, second for secondary treatment, and recently for tertiary treatment.

I think that now the population equivalent of the load on the river is higher than it was in 1934. So I --

MR. STEIN: By the way, I do not doubt it. But what I am suggesting to you, sir, is this. I have not been here this long. I started in this in 1948. As far as I can see, we have always underestimated the load to the Potomac, and we have always proposed programs which were too little. Even those programs which were too little came into execution when they were too late.

I would hope that when you look at the existing proposal of the Federal Government and the other proposals -- and I think you have analyzed them very well -- that you, the citizens, the conferees will not come up with something that is too little or too late, because I think we are doomed for another 20 years of a polluted river if we do that.

MR. SIMS: That is right, Mr. Chairman. Save us from people with small imaginations.

MR. STEIN: Right. Thank you.

Mr. Coulter.

MR. COULTER: Mr. Sims, could I ask you another question? Because I think it is important. I know that you and the League have worked very hard not only in water pollution control but in other things in Maryland, and I know that you worked very hard on the water quality standards. And you know what the standards mean.

MR. SIMS: Right.

MR. COULTER: The standards for the District of Columbia have been adopted in terms of criteria for cleanliness of the stream and a plan of compliance. And what I really want to know is this: Does the testimony that you gave us here mean that the Izaak Walton League would like to see us put aside the plan of compliance that was accepted by the District Government and the Secretary of the Interior two years ago, and which we thought we were moving forward to implement, and move on to a different plan of compliance along the lines that Mr. Bacon proposed to us through the Assistant Secretary and his representative this morning?

MR. SIMS: I think the League would be unwilling to jettison entirely the agreement reached two years ago.

But Mr. Bacon's plan and more recent thinking in terms of protection of the estuary are bending League thinking away from a colossal Blue Plains and into somewhat better dispersion of this load.

For one thing, I think we have long since passed the economy-of-size Blue Plains, and my own personal viewpoint is I don't like to see these colossal setups. They are too vulnerable to accidents, to whatever.

So I think the League is beginning to switch away from a massive plant at Blue Plains and thinking in terms of at least let's look into the possibility of disseminating, spreading this load around some.

MR. COULTER: If you would permit me, sir, to explore it just a little further --

MR. SIMS: Yes.

MR. COULTER: -- we have heard from the District of Columbia, and we have certainly consulted with them and been in meetings and at this conference. It has been revealed that at the Blue Plains site a sewage treatment plant of the so-called advanced waste type can be built to accommodate 419 MGD. The plan of compliance is moving forward with a first-phase increase to a level of 309 MGD.

The proposal we heard from the Federal officials today would move us backwards from a design capacity which is stated in the conference record of 290 MGD to 240 MGD, which is some 8 or 9 MGD less than the plant is now receiving.

I want to make perfectly clear that that is what the Izaak Walton League is supporting.

MR. SIMS: The withdrawal back to 240 MGD?

MR. COULTER: Yes, sir.

MR. SIMS: I don't believe I am prepared to back that reduction.

MR. COULTER: I didn't mean --

MR. SIMS: Part of the reason is, as Mr. Keeney tried to bring out, that currently Maryland is already putting 114 MGD into Blue Plains. And to forthwith and summarily reduce Maryland's share back to a gross of 67 MGD 10 years from now I think would --

MR. COULTER: Would be disastrous?

MR. SIMS: What would we do with 67 MGD? I didn't have anywhere near that much in my basement when the sewer backed up last February. (Laughter)

MR. COULTER: But you took your share?

MR. SIMS: But I had some, and I don't want any more like that. I don't want to see the valve shut off.

I don't know whether I have answered your question.

MR. COULTER: You have. Thank you, sir.

But I wish the League would think that over.

MR. STEIN: How much are you putting in, Mr. Coulter, now, in Blue Plains?

MR. COULTER: My understanding is the record is 248 MGD. I heard today 249 MGD. This is annual average.

MR. STEIN: And we are asking for 240 MGD.

MR. COULTER: We are asking for 240 MGD.

MR. STEIN: But the 248 MGD is not being treated adequately now, is it?

MR. COULTER: No. There are several deficiencies that were included in the plan of compliance to bring the plant up to the level of performance that it would meet the water quality standards.

MR. STEIN: Well, as I understand the Federal proposal, they asked for 240 MGD to be treated very adequately. And if we are dealing with 248 MGD not being treated adequately, a proposal of 240 MGD being treated adequately maybe is not a step backwards.

MR. COULTER: I don't think that is the choice. And I do think it is a step backwards. And I would remind you the Secretary of the Interior signed off on a plan of compliance for enlargement of this plant which would meet the water quality standards and had the improvements to meet the water quality standards worked into it. Otherwise I am sure he would not have signed off on that plan of compliance. I trust him.

MR. FREESE: Mr. Chairman --

MR. STEIN: Yes?

MR. FREESE: I would like to ask Mr. Sims a question.

MR. STEIN: Surely.

MR. FREESE: I believe you indicated the League is beginning to feel that the recommendations by Professor Bacon have some merit. May I ask you how long the League has been considering Professor Bacon's recommendation, if that is a proper question?

MR. SIMS: I think the staff discussed the report with him. I did not personally. But I think the staff of the Washington office did before it was put out, if I understand correctly.

It has not relied exclusively upon the summary which was made available today.

MR. FREESE: I see. We in the District have known nothing about the report until this morning. I was interested that you had been able to analyze it and come to some conclusion at this early date.

MR. PANKOWSKI: Could I answer that?

MR. STEIN: Yes, Mr. Pankowski.

MR. SIMS: He is on the staff of the Washington office.

MR. STEIN: Will you identify yourself for the record?

MR. PANKOWSKI: I am Ted Pankowski with the national staff of the Izaak Walton League here in Washington, D. C.

We have known Mr. Vinton Bacon and his work in the Chicago metropolitan area for a number of years and we have discussed with him on numerous occasions the whole question as to whether we ought to go into decentralization of sewage treatment plants within a regional system.

So the recommendations you are hearing today were discussed with our own people based on I would say a developing history of our concern with respect to modern trends in sewage treatment systems.

Is that responsive?

In addition, we have discussed this particular set of recommendations with Mr. Bacon privately in general terms.

I would not even begin to speak for him. He is very capable. And I am sure tomorrow morning he will answer any questions you may have.

But based on the work and based on our familiarity with his ability to deal with these problems, we feel very confident that the recommendations he has made carry considerable weight.

MR. FREESE: Thank you.

Mr. Chairman, I hope the conferees are afforded the same opportunity to review and analyze recommendations before they are asked to act upon them.

MR. STEIN: Well, Mr. Bacon will be here. After all, you have been working at this problem. I am not sure that this isn't like the girl who came to the surprise party and professed to be surprised when everyone said "Surprise." And maybe you didn't hear about this before.

MR. FREESE: Mr. Chairman, I do not know if you are asking for a comment on that.

MR. STEIN: You can comment on anything.

MR. FREESE: The conversation seems to be on girls, but --

MR. STEIN: That is the way I like to keep it. (Laughter)

MR. FREESE: -- but if we are being asked to judge the report on the basis of the author, I think we have had some pretty good authors on some previous reports that have been developed over the past few years.

MR. STEIN: I think you have been asked to report on the basis of its merits. And unless I underestimate the conferees here, I would be very startled if they were surprised at these proposals.

But if you want to profess surprise for the record, the record is open.

Are there any other comments or questions?

(No response.)

If not, thank you very much.

MR. SIMS: Thank you, Mr. Chairman.

MR. STEIN: May we hear from Mr. Paessler? We will hear the Virginia progress report.

Before we do this, are there any other citizens who want to speak, or other groups?

(No response.)

If not, Mr. Paessler.

STATEMENT OF

A. H. PAESSLER, EXECUTIVE SECRETARY,
VIRGINIA STATE WATER CONTROL BOARD

MR. PAESSLER: Thank you, Mr. Chairman.

Fellow conferees, ladies and gentlemen: I am pleased to report today that, in accordance with the recommendations adopted by the conferees on May 8, 1969, the County of Arlington, the Alexandria Sanitation Authority and the County of Fairfax are proceeding to implement the recommendations and are on schedule.

I think that we have action here and not rhetoric.

At its meeting on April 7 and 8, 1970, the State Water Control Board advised the localities that it would expect compliance with the recommendations for BOD and phosphorus removal. However, at this time the Board and the staff are not aware of any process for nitrogen removal that has reached such a stage of development that design engineers could incorporate such a process in final plans.

As a result of this, the Board has indicated that the Virginia localities will be permitted and expected to continue research on nitrogen removal and processes, and we are, of course, hopeful that in the near future an adequate process will be available.

I am further pleased to report that there have been significant developments in Fairfax County in recent weeks. Fairfax County has authorized and received from its consulting engineers a report on the feasibility of combining facilities in the county that discharge treated effluent to the Potomac Estuary system.

Among these plans is one proposal to abandon the Westgate sewage treatment facility and convey the wastes to the Alexandria Sanitation Authority plant for treatment and disposal. You heard Mrs. Klein express some reservations about the desirability of doing this. Contract discussions are now under way, and they will be expected to be finalized momentarily.

In addition, the county's Little Hunting Creek and Dogue Creek plants may be discontinued with the wastes from these plants to be conveyed to the Lower Potomac plant for treatment and disposal.

In addition to providing for the abandonment of the Little Hunting Creek and Dogue Creek plants, this plan will provide a means for conveying wastes from the two plants at Fort Belvoir to the Lower Potomac plant for treatment and disposal.

We are particularly pleased with these developments, since the effect will be to reduce the number of discharges to the Potomac estuary from Fairfax County from 5 to 1. Whether this fits into the concept that was espoused here today I do not know.

With the complex treatment processes that will be required to produce the necessary effluent quality to insure the protection of the Potomac Estuary, the combining of wastes from these facilities will provide for a much more efficient operation and maintenance.

Mr. Stein has asked that the conferees make reports relative to their authority to control the issuing of building permits by local jurisdictions, particularly when existing sewage treatment facilities are inadequate. On June 1, 1961 the Board adopted Requirement No. 1 which provides that in cases where an owner is not adequately treating sewage wastes, he must submit to the Board a definite plan for instituting corrective measures. When such a plan is submitted and is either approved or is not disapproved by the Board, the Board may, at its option, approve additional connections in keeping with progress made by the owner in implementing his schedule.

Mr. Chairman, I have a limited number of copies of Requirement No. 1 and will be glad to make them available to the conferees.

There has been considerable interest in the incorporation of an overflow line at the Lower Potomac plant. I am pleased to report that the following actions have been taken by the County of Fairfax:

1. At a cost of $42,000 the county has authorized the Virginia Electric and Power Company to take the necessary steps to insure the separation of the primary and secondary power sources serving the Lower Potomac plant.

2. A metering device is being designed to measure the duration and volume of all overflows which may occur.

3. The county's consulting engineers have recommended additional electrical power facilities which will provide for diesel-powered generation of power to insure raw wastewater pumping, primary treatment including settling tank equipment operations, sludge pumping, degritting, sludge thickening and disinfection by chlorination should the primary and secondary power sources fail.

4. Additional spare parts will be acquired and stored at the plant to insure continued operation of the conveyer which removes debris in the screening process at the plant.

5. In addition to all of the above, there is a very real possibility that a holding pond for complete containment of overflows may be constructed, but a decision concerning this must await final decisions concerning the combining of the several plants with resulting increased flow to the Lower Potomac plant. This may necessitate the construction of a larger pond than previously contemplated,

or land otherwise available for the containment pond may no longer be available.

I might point out with respect to the construction of a holding pond this is purely a matter of how long you want to contain the wastes and to prevent overflows. This, of course, in turn involves how much land will have to be bought.

Mr. Chairman, I am sure that you will agree that the above safeguards far exceed any now available within the conference area and will be more than adequate except in the most extreme emergencies.

Thank you.

MR. STEIN: Thank you, Al.

I am not sure I could quite get your Southern accent, although we have been talking for years, and I know you are talking about waste disposal. Did you mention spare parts or spare pots? (Laughter)

MR. PAESSLER: Maybe it ought to be spare pots. (Laughter) I meant to say "parts."

MR. STEIN: Oh. Parts? (Laughter)

Are there any questions or comments?

MR. BLAISDELL: I have a question for Mr. Paessler.

Al, in April of 1965 your Board saw fit to invoke the provisions of Requirement No. 1 against the City of Fairfax until such time as they took certain actions. This morning I noticed some publicity in the paper to the effect that apparently they are still having a considerable problem at the City of Fairfax with respect to Accotink Creek.

How do these two things relate? In other words, was requirement No. 1 removed?

MR. PAESSLER: I think that is outside the province of this conference, and I am not prepared to comment on it.

MR. STEIN: I guess that is your privilege. All right. You do not think that has relation to State pollution, Al? Or don't you want to expand on why it is outside the province?

MR. PAESSLER: I would prefer not to go into it at the moment. I do not think it is germane really to the situation to discuss it here.

MR. STEIN: All right. Any other comments or questions?

(No response.)

If not, I think we will do one more thing today and maybe have Mr. Karraker of the National Park Service with a movie.

Mr. Karraker.

STATEMENT OF

DAVID O. KARRAKER,

NATIONAL CAPITAL PARKS, NATIONAL PARKS SERVICE,

UNITED STATES DEPARTMENT OF THE INTERIOR

MR. KARRAKER: Mr. Chairman, ladies and gentlemen: Mine is a progress report on debris cleanup in the Potomac, a responsibility assigned to the National Park Service by the enforcement conference of last spring -- not that we should do all the work but that we should coordinate.

My name is David Karraker.

I think an event of yesterday that you perhaps saw in the newspapers well reflects our position. That was the launching of a landing barge, dedication of a craft that is just about as ungainly as they come. It is old and it is green. It is not tired; it has got a new motor.

The dedication happened through cooperation of the Corps of Engineers, the city, kids of a junior high school, and, of course, the Park Service too.

And this is what we are talking about. Our responsibilities under the enforcement conference are a continuing program of cleanup along Park Service lands, a review of State and local park agencies' procedures with a view toward modifications of these procedures, a public information program to obtain maximum citizen participation, and appropriate coordination with the Corps of Engineers.

Our dedication yesterday I think happened just as it should. We tried to lift the anchor, and it was caught on debris in the river. And that is the information. But beyond that, public involvement I think centers around a film that we have just prepared, actually a series of films. These will be TV announcements. They are short. They are quick. And I hope you like them because today you will have the world's premiere. We don't have any movie stars to go with it except myself.

Other efforts to get public involvement in this problem are through a series of literally hundreds of talks that we have given to service groups, schools, all manner of people, alerting people to the problem and soliciting their help.

We have presented a graduate-level course and are presenting it at D. C. Teachers College, and a great portion of this involves the ecology and health of the river. If you would like three credits, we can sign you up.

Partially through these activities, but I think really more importantly through the great environmental concern of this spring, we have had an outflowing of literally dozens of volunteer groups to work on the river. And every imaginable group were a part of it, ranging from a wife followed by three rather helpful or unhelpful kids -- my wife and my kids -- on up to Fort Hunt High School with 400 young people working hard, the

Prince George's Boat Owners' Association, Paul Junior High School, Alexandria Young Republicans, the White House Volunteers, church groups, and on and on.

Lots of groups worked on this problem, but we never knew about them. They just came and did their job and were through with it.

Cooperation with other agencies I think has been great this spring. I would like to add while we are all still here that many people will tell you that the river is perhaps a problem that you will not solve as far as debris is concerned. In a way you beautifying a sewer. But this is not our opinion in Park Service, nor is it in the minds of the thousands of young people and older people who worked on the river.

From the work we did last summer you can still see places that are virtually clean.

So when we are talking about old tires and oil drums and matters of this sort, a cleanup job does do good, and we can see it, and we can document it.

Christ Lutheran Church of Washington I think epitomizes what cooperation can do, and I would like to quote from their weekly report I guess it is on what they do in general. This is it:

> "To help in the removal of this STUFF" -- and they underline that seven or eight times -- National Airport

provided us with a 20-ton crane and winch truck, two dump trucks with drivers, several empty dump trucks with all the tools and baskets we could use, and advisory personnel. The National Park Service continued to provide technical assistance. The Army Corps of Engineers sent us two tugs and barges with operating teams and supervisory personnel. Volunteers included members of CAF, people from the local community, students from American University and George Washington University, young people from other Lutheran churches, and a group from Jefferson High School in Fairfax County all working together to clean up the river."

We have heard a number of comments today that cooperation sometimes does not happen. Well, on debris cleanup it does happen.

The report from the Army Corps of Engineers I will give in brief because of the lateness of the hour, and the rest of my report as well.

MR. STEIN: By the way, how long are your movie and reports going to take?

MR. KARRAKER: The movie is exactly 2 minutes long. The rest of the report is 5 minutes.

MR. STEIN: All right. Let's hope to get out by 5:00. Let's go.

D. O. Karraker

MR. KARRAKER: I seem to inherit the last place at each Potomac Enforcement Conference.

Okay. The Corps of Engineers removed 867 tons of debris in the last 6 months.

Bolling Air Force Base removed 2 dump trucks full and had all kinds of support from their staff.

The D. C. Department of Public Health has produced a booklet regarding the river and its debris.

The Washington National Airport we reported on.

The Maryland National Capital Park and Planning Commission has cleanup work going on on the tributaries in a great way.

The National Park Service has had a meeting this spring with representatives from about 30 different agencies to draw support in from wherever it might be received. We removed 150 tons of debris from the shores this spring, involving 3,100 manhours of work and 2,200 equipment hours, and the boat itself, the "Clean Stream."

Plans for the future: a clean river.

(The statement in its entirety follows:)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
1100 OHIO DRIVE, S. W.
WASHINGTON, D. C. 20242

PROGRESS REPORT

Debris Cleanup - Potomac River and Tributaries
Washington Metropolitan Area
November 1969 - May 1970

Following the Spring 1969 Potomac Enforcement Conference, the National Park Service accepted the following responsibilities:

1. A continuing program for the clean-up of shoreline debris and litter.
2. A review of State and local park agencies' operating procedures with a view to modifications which will minimize the amount of debris and litter which may enter the Potomac and its tributaries.
3. A public information program to obtain maximum citizen participation.
4. Appropriate coordination with the Corps of Engineers.

Mr. David O. Karraker of National Capital Parks was assigned coordination of the overall project. Substantial progress was made on all facets of the program. Most noteworthy were the following:

Progress Report - National Park Service

Public Involvement: To enlist public support for a clean river, three television spot announcements have been prepared and distributed to Washington stations in recent days.

Dozens of talks on environmental matters were presented to tens of thousands of people representing schools, scout groups, civic organizations, universities, churches, and the public in general. In this manner the necessity of a clean Potomac was impressed upon varied audiences.

As a part of the National Park Service course, "Environmental Education for Elementary School Teachers" at the District of Columbia Teachers College, the ecology and necessity for a clean river were strongly stressed. This was also a major theme at the eight-week course for youth leaders jointly sponsored by the Audubon Naturalist Society and National Capital Parks.

As a partial result of these activities and a general environmental concern by the public, volunteer groups have made enormous contributions to river cleanup this spring. Every imaginable type of group pitched in, ranging from a mother trailed by three "helpful" children to highly organized groups of hundreds of high school students. Also dozens of volunteer groups worked city streets contributing to the decrease of debris eventually reaching the river.

Progress Report - National Park Service

A sample of the variety of citizens groups involved in the river cleanup follows:

Prince Georges' Boat Owner's Association (two days)
Paul Junior High School - Science classes of Miss Katie Walker
Alexandria Young Republicans
The White House Volunteers
Christ Lutheran Church of Washington (two days)
Fort Hunt High School, Alexandria (400 students)
Many others

A number of groups simply pitched in and we learned of their good work after the fact. However, most were well covered by television or the newspapers.

Cooperation with Other Agencies: The real spirit of mutual assistance in overcoming the debris problem is best seen in a newsletter of Christ Lutheran Church of Washington:

> "To help in the removal of this STUFF, National Airport provided us with a 20-ton crane and a winch truck (with driver-operators), two dump trucks with drivers, several empty dump trucks with all the tools and baskets we could use, and advisory personnel. The National Park Service continued to provide technical assistance. The Army Corps of Engineers sent us two tugs and barges with operating teams and supervisory personnel. Volunteers included members

of CAF, people from the local community, students from A.U. and G.W.U., young people from other Lutheran churches, and a group from Jefferson High School in Fairfax County."

The Army Corps of Engineers:

"From November 1969 through April 1970, as a result of the Corps of Engineers drift collection and disposal operations in the Potomac and Anacostia Rivers, 867 tons of debris have been removed and disposed of. A floating incinerator is under design by this Department for use in the Washington Metropolitan area for disposal of collected debris. This incinerator is being designed to meet all the standards established with regard to air pollution, and it is expected that it will be under construction during the coming fiscal year. A prototype land-based plant built in New York will be subject to tests by the Department of Health, Education and Welfare and others involved in air pollution control, and the results of these tests will be utilized for formulating the final design of the one to be constructed for the Washington area.

"This office has been making our barges available to private associations who, through volunteer groups, are collecting debris from the Potomac and Anacostia Rivers."

Certainly the Army Corps of Engineers continues to be most helpful in supplying equipment and assistance when requested.

Progress Report - National Park Service

Bolling Air Force Base:

"Bolling Air Force Base conducted an extensive shore line clean-up campaign on Saturday, 18 April 1970, along the entire length of the Potomac River bordering Bolling Air Force Base. More than 200 manhours were expended during the clean-up campaign, along with the use of the following equipment: Two dump trucks, one 1½ ton stake and platform truck, one 40 foot trailer and tractor, one front end loader, and one bulldozer.

"All litter and debris, large and small, was removed and trucked to the D. C. Blue Plains Refuse Area for disposal. Twelve loads of debris were hauled by dump truck, two loads by the 1½ ton truck, and one load of heavy logs and lumber by the 40 foot trailer."

District of Columbia Department of Public Health:

"(1) Revision of 'Potomac, People, Pollution - A Report to the Public' was begun. This booklet will mention the role of the individual in controlling this problem.

(2) A representative of this Bureau discussed water pollution control during a recent radio program. The problem of litter and debris was emphasized.

(3) A regulation governing pollution, including solid wastes, emanating from watercraft was approved by the City Council and the Mayor. The effective date of this regulation is August 1, 1971."

Progress Report - National Park Service

Washington National Airport:

"Seventy-five tons of litter and debris were cleaned up around the shoreline of the airport during the month of April. On 25 April 1970 we assisted the Christ Lutheran Church of Washington in cleaning up the Four Mile Run area. All debris collected was buried on airport property."

The Maryland National Capital Park and Planning Commission:

"We have, under the direction of the Principal Park Horticulturist, a permanent stream cleaning crew that regularly deals with debris accumulations in Rock Creek, and other tributaries of the Potomac system. This will be a continuing process.

"Working with the staff in our Brookside Nature Center, five volunteer young groups assisted in the stream cleanup before and after 'E' day.

"A five-man crew, under the direction of Park Naturalist Robert Powell, spent a good portion of the month of April in cleanup and rehabilitation of the Dickerson Regional Park Area fronting on the Potomac and C & O Canal in the area of Dickerson, Maryland. This work involved the removal of waterfront litter, refurbishing of trails, replacement of recreation signing, and installation of new trash receptacles. As manpower permits, we intend to expand our cleanup efforts in the Rock Creek Valley and are supporting new efforts of the Maryland Environmental Trust to clean up and maintain the Seneca Creek Tributary."

National Park Service Debris Removal:

On April 15, a meeting was held at National Capital Parks Headquarters with a great variety of people concerned with a clean Potomac. It was an idea-sharing session and an opportunity to become better acquainted with the people who are doing the work. The meeting was attended by representatives from The Army Corps of Engineers, Prince Georges' Boatowner's Association, Bolling Air Force Base, Washington Navy Yard, Northern Virginia Conservation Association, Fairfax County Park Authority, Mount Vernon Association, Maryland National Capital Parks and Planning Commission, Committee of 100, Washington National Airport, District of Columbia Department of Public Works, Commission on Undergraduate Education in the Biological Sciences, Finley Motion Picture Producer, League of Women Voters, Potomac Basin Interleague, Appalachian Trail Club, and Alexandria Public Works Department.

This spring National Capital Parks personnel assisted ten volunteer groups in removal of approximately 150 tons of debris.

During the past six months park maintenance crews have removed approximately 420 tons, involving 3100 man hours of work and 2200 equipment hours as a part of their continuing cleanup program.

To assist in cleaning mudflats and other areas difficult of access, a 36-foot motorized landing craft was acquired. On May 20 she was dedicated the "Clean Stream" by Mrs. Walter Washington. The "Clean Stream" now joins the "BD-4" and the "BD-5" of the Army Corps of Engineers and assorted craft of the Prince Georges' Boatowner's Association as the work horses of the river. Added to this flotilla is a small work boat constructed for use around the Tidal Basin and East and West Potomac Park.

PLANS FOR THE FUTURE

A Clean River.

- - -

MR. KARRAKER: If I may have the lights and the film, please.

(Film.)

MR. STEIN: That is very good.

Are there any comments or questions?

(No response.)

If not, we will stand in recess until 9:30 a.m. tomorrow.

(Whereupon, at 5:05 p.m., the conference was recessed, to be reconvened at 9:30 a.m., Friday, May 22, 1970.)

* * *

May 22, 1970

9:40 a.m.

MR. STEIN: Let's reconvene.

We will continue with the Federal presentation.

Mr. Blaisdell.

STATEMENT OF

F. R. BLAISDELL, ACTING REGIONAL DIRECTOR,
MIDDLE ATLANTIC REGION, FEDERAL WATER QUALITY
ADMINISTRATION, CHARLOTTESVILLE, VIRGINIA

MR. BLAISDELL: Mr. Chairman, fellow conferees, ladies and gentlemen:

About 13 years ago, this conference was called to establish a remedial program for eliminating the polluted conditions that existed in the Potomac River in the Washington area.

A year later, a second session was held, and a program for the cleanup was prescribed. Essentially, it called for sewage treatment at all sources to remove 80 percent of the pollutional materials. To a large degree this was accomplished, but the great population increase that took place after 1958 was not expected. By 1969 it was apparent that the earlier recommendations were not sufficient to do the job.

A third session of the conference held in April and May 1969 resulted in recommendations for treatment beyond conventional secondary. Severe restrictions on loadings of BOD, phosphorus, and nitrogen were assigned to each plant in the upper estuary.

It appears now that even that was not enough. Recent studies to be reported today show that even higher degrees of treatment will be needed, largely because the population is increasing at such a rapid rate. It is estimated that the population of the area has increased 111,000 in the past year alone.

The Federal Water Quality Administration has three reports to present today. First, there is one on present water quality in the Potomac and on studies of the Chesapeake Technical Support Laboratory since the last conference.

Mr. Johan Aalto, Director of the Chesapeake Technical Support Laboratory will summarize that report.

Next, we have requested Dr. David Stephan, Assistant Commissioner for Research and Development of the Federal Water Quality Administration, to bring us up to date on the status of advanced waste treatment.

Because of the possibility of locating a sewage treatment plant on the Anacostia River, our Chesapeake Technical Support Laboratory has made a study of the Anacostia. Dr. Norbert Jaworski of that facility will report the results of that study.

Before we get into these --

MR. STEIN: Just a moment, Mr. Blaisdell.

I think Mr. Coulter of Maryland would like to say something.

MR. COULTER: Mr. Blaisdell and fellow members of the conference, since this is an informal conference following informal procedures, I would like to suggest that we depart from the agenda and go back and discuss some of the material that was presented to us early Thursday morning before we go into the technical reports that I believe will be most welcomed from the Federal Water Quality Administration.

MR. STEIN: Would this be agreeable to the other conferees?

MR. McKEWEN: Very agreeable.

MR. STEIN: All right. Why don't we do that? You don't have an objection to that, do you?

MR. BLAISDELL: No, no objection.

MR. STEIN: Thank you. Why don't you sit down, and we will open this to questions.

I might indicate that Mr. Vinton Bacon is now here. He worked with the Federal people in preparing this material and will be available to comment or answer questions.

MR. COULTER: Well, permit me then to lead off.

Assistant Secretary Klein yesterday opened the conference and stated that last year we set standards at this enforcement conference. He went on to point out that those standards were strict and a model for the Nation.

I would like to believe that the Secretary really didn't mean that we set standards at this conference. But for a matter of clarification I would like to know what we are about at this conference. Are we setting standards and are we changing the plan of compliance that was developed under the Federal Water Quality Act duly approved by the governing body of Maryland, Virginia, and the District of Columbia, and at least in the case of the District of Columbia and Maryland approved by the Secretary of the Interior?

Because, if that is so, I believe the purpose of this conference should be to devote its attention to whether the plans of compliance and the water quality criteria -- which in themselves represent the standards which have been approved and are the Federal standards for these waters -- are or are not being met.

MR. STEIN: Does anyone else want to comment on that?

I think it is clear, Mr. Coulter, that this is not a standards-setting conference but an enforcement conference. We have a standards-setting procedure. We would hope that anything we do in standards-setting and enforcement actions is perfectly compatible, and I hope it will be compatible here.

The charge here under the Federal law is to take action which will stop pollution which endangers health or welfare. As I understood the proposals of the Assistant Secretary, it was indicated that we would need certain levels of water quality and treatment if we were going to keep the water of the Potomac so clean and free from pollution that it would not endanger health or welfare. This is the way I understood his proposal.

I think the question we have here is that we had set up certain requirements at previous sessions of this conference, and again as I understood this -- and perhaps we can hear from some of the Federal people or from Mr. Bacon -- in a reappraisal of this by the Federal people, they have felt that the requirements we have had were not stringent enough because of certain changes which were made.

Therefore, they proposed an amendment to these requirements yesterday morning and that the conferees consider that.

I think that would be perfectly appropriate for the conferees to consider if you believe that what we were doing now would not provide pollution-free waters in the Potomac; if the program would not lead to that.

MR. COULTER: Well, I have initial questions, and I will let the other conferees speak for themselves if they are inclined to do so on these subjects.

I want to make it clear that there has been no caucus or consensus taken, and this deliberation is out in front of the group here as well as between the conferees sitting at the table.

Yesterday we also heard a reiteration of information which we had received in a previous letter to the effect that one of the aspects of regional development, regional sewerage policy in the Washington metropolitan area would be through the use of small sewage treatment plants on a temporary basis.

The statement of the Department went so far as to intimate that unless the regulatory agencies of the jurisdictions involved properly set about implementing this new policy, which was announced yesterday, that the Department of the Interior would use its full authority under the Water Quality Act and invoke a 180-day notice.

Now, I am a little bit taken aback at this approach. I have before me a fact sheet which outlines the President's message to the Congress on the environment, and point No. 7 said that we were going to encourage the construction of large-scale regional treatment facilities.

I heard what Mr. Klein said about small temporary plants being regional, but by no stretch of the imagination can I correlate what the President said in his message with what the Assistant Secretary announced to us yesterday.

If the Water Quality Administration people here can enlighten us on that and show us how these two things are compatible, then perhaps the States can move in concert with the Federal Government in this area.

MR. STEIN: Again, I think we may be in better shape if we call on Mr. Bacon now to give you the rationale.

But before we do that I might say, as you know, Mr. Coulter, I have been engaged in many enforcement actions throughout the country, and I have not been as close to developing this --

MR. COULTER: I understand.

MR. STEIN: -- as I might have been.

But as far as these 180-day notices, I don't know in my mind that that is related at all to putting up package treatment plants on a temporary basis or not.

I always thought that was a proposal so you could have a shiftover.

Looking at the record here --

MR. McKEWEN: Mr. Chairman, --

MR. STEIN: -- when we have asked the District to move -- and we have been talking for about a year and I see no move toward providing anything but conventional treatment -- and when they came up with a plan, if the facts are correct, for certain requirements at the Piscataway plant at 15 MGD and instead you are going to put in 30 MGD, I think those facts might speak for themselves in justifying 180-day notices.

I do not have any problem in moving forward if the communities here are not moving forward.

And I don't see, as far as I can tell, what the issue of temporary package plants has to do with this.

MR. McKEWEN: Mr. Chairman, --

MR. STEIN: Yes?

MR. McKEWEN: At that point, may I make two comments?

One, I hope that the facts do speak for themselves in two regards. One is that the Piscataway plant was proposed to be enlarged to 30 MGD, and all the information available at that time from both State and Federal agencies indicated that such a discharge could be made to Piscataway at the treatment levels adopted by the conference without damaging water quality.

The 15 MGD proposed limitation to which you refer we received officially on April 10, long after the project had been agreed to by both the State and Federal agency.

So I think in terms of chronology we need to get the dates clarified.

The second point raised by Mr. Coulter referred to a statement read into the record yesterday morning by Frank Blaisdell. The statement ended with the paragraph:

"Should the responsible jurisdictions and agencies fail in this regard, the Department of the Interior will use all legal powers under the Federal Water Pollution Control Act, including the 180-day notice, to protect this vital water resource from further degradation."

The question I have is: What is modified by the phrase "in this regard"?

If it refers to the entire statement, then it refers to a number of items, including a moratorium on building construction, setting a limit for the D. C. plant -- and I don't know whether he mentions a numerical limit -- and building other plants.

It refers also to decentralized regional facilities.

So there are a number of items included in the statement, and I do not know whether all of those are meant to be modified by the phrase "fail in this regard" or not.

MR. STEIN: Do you want to comment, Mr. Blaisdell?

MR. BLAISDELL: I think that maybe we need to clarify a few points.

In the first place, Interior feels that we need an action plan with respect to Blue Plains. Murray has pointed out a few minutes ago that we have been at these conference tables for over a year now and little or nothing has happened. We have not seen anything presented to us, either by the District, or by Washington Suburban, with respect to the Blue Plains sewage treatment plant.

So Interior has come up with a proposal. We don't insist that you accept this proposal, all or even in part. But if you do not accept it, then we would expect that you come up within a short period of time with an agreement on what you are going to do. And we would think that a reasonable period of time would be 30 days from this date.

We would also expect that within 60 days from this date you would come up with some sort of an implementation plan and schedules, with locations of sewage treatment plants, if this is part of your plan, so we would have something that we could move forward to.

I think that takes care of Blue Plains.

I think with respect to temporary sewage treatment plants -- and we will hear further on this from Professor Bacon later -- there must be a misunderstanding here of what our intention is in this respect.

Yesterday's paper and also today's paper carries several articles concerning the moratorium on building in Maryland and in the metropolitan area communities. We believe that package treatment plants may be used in some instances to allow development on an interim basis until such time as regional facilities can be constructed to handle the waste.

We do not intend to infer that package sewage treatment plants can practically be utilized to take care of the overflows that are reaching some of the presently existing plants.

With respect to Piscataway, I am a little puzzled by what you said, Tom, on the 15 MGD. We tried to point out that the present levels of treatment that have been established by the third session of the conference would only adequately serve a 15 MGD capacity there and that we recommend it to the conferees, because of this, the level of treatment be raised to accommodate the 30 MGD.

MR. McKEWEN: To clarify the clarification -- (Laughter) -- the only point I was attempting to make, Frank, was that the chairman indicated that the proposal to expand the plant to 30 MGD could be considered contrary to protection of water quality of Piscataway Bay as indicated by the current findings of FWQA.

I simply point out that those findings, which we have received in a rather sketchy form so far and received only a few days prior to the convening of this conference, did by a period of several months come after the approval by both the State of Maryland and FWQA of the 30 MGD proposal.

MR. STEIN: Let me try to get a fundamental issue clear here on Piscataway. I think if we talk about the issue of when the proposal came or any kind of dates we are not going to get to the heart of the issue.

The heart of the issue, as I see it, is this:

We came up with certain recommended reductions for the Piscataway plant based on a 15 MGD capacity. If Maryland wants to put more than 15 MGD into Piscataway plant and discharge to the point where they are proposing to discharge, I think that the Federal information we had yesterday indicates that unless the percentages he talked about are raised there is going to be an unsatisfactory condition.

Therefore, unless that is taken into account and the treatment is raised, we may be liable, if we have a polluted condition, certainly to all appropriate action, as Mr. Blaisdell pointed out. And I think this is the issue.

Now, you may or may not agree with this. But I think in order to try to get a meaningful discussion these are the issues involved.

MR. McKEWEN: I think there are two issues involved. One is the matter of the technology or the techniques of predicting the effect on water quality.

The Federal finding to which you refer I have assumed to this point are findings, recommendations to be made to this conference, --

MR. STEIN: Yes, that is correct.

MR. McKEWEN: -- to be considered by the conference, and either adopted, modified, or rejected, as the conferees may in their best judgment wish to do.

MR. STEIN: That is right.

MR. McKEWEN: The second issue, and I think perhaps the more important issue at this time, is whether or not there should be a discharge of that sewage to Piscataway Bay at all or whether the point of discharge that is considered to be more logical by virtually everyone who has looked at it -- discharge to the Potomac River -- should be implemented.

In that regard, I would hope that the Federal Water

Quality Administration could serve to help support the proposal to go to the Potomac River through contact with the sister agency in the Department of the Interior, the National Park Service.

MR. STEIN: Again, if you are going to frame the issues, I think that is a good one too.

There is a notion here that I have heard from citizens of Maryland who are concerned with Piscataway. No one is making anyone go to the Piscataway Bay. This was a choice of the Maryland authority. Putting a pipeline across the parkland is not your only other alternative. There are several other alternatives in southern Maryland if I understand it.

The point is, again, if anyone decides to put a waste treatment plant anywhere, I don't know that the Federal Government has any right to talk about land use or what a State or a local subdivision wants to do. But if you are going to put a sewage plant anywhere, and you are going to pick the kind of watercourse where you have the right to put that effluent, in carrying out the Federal function we are going to ask that you make the kind of treatment available and possibly the fail-safe devices available which will insure the protection of those public waters.

MR. COULTER: Certainly the State will support the Federal Government in that and use its powers to see that the water discharge, wherever it might be, receives liquid in a condition that will meet all applicable State and Federal standards and go further than that and get the water just as clean as we possibly can.

I would like to clear up the business of 15 MGD. The record will clearly show that the Washington Suburban Sanitary Commission is under orders from the State to enlarge the capacity of Piscataway plant and that all discussions with Washington Suburban and at this conference were in terms of a phased enlargement to 30 MGD.

The first phase was some 15 MGD addition. Or was it 12.5 MGD?

MR. McKEWEN: To reach a total of 15 MGD.

MR. COULTER: To reach a total of 15 MGD.

Furthermore, the State, in dealing with the Washington Suburban Sanitary Commission and the Federal Government, has been basing its calculations and its requirements on the results of this conference a year ago, where we clearly said that based on the assurance of the Federal Government, these agreements between the States will enhance the quality of the Potomac River, we will proceed with the recommendations that followed. In those recommendations was the Piscataway sewage treatment plant.

I concede that if later evidence shows we should go to a higher degree of treatment, that will be properly taken care of. But I believe that our basic question lies right in Mr. Blaisdell's statement -- that we have been floundering around --

and "floundering" is my word, not Mr. Blaisdell's -- for a year without a plan of action for the Blue Plains sewage treatment plant.

That same thought was expressed in a letter that we again received, that the conferees received, and Mr. Klein was kind enough to send me a copy of it, in which the first two paragraphs state:

> "You will recall my letter of February 24, 1970, to the conferees of the Potomac River Enforcement Conference. In it, I urged that the conferees meet at the earliest possible date to 'consider the full range of alternatives available and to adopt the most promising of these to achieve the desired and necessary cleanup of the waters of the Potomac.'
>
> "The time for the next conference session will be at hand shortly, and I view it as a time for decision."

Mr. Chairman, my point is that decision was made after due procedures carried out under the Federal Water Quality Act. The time of decision was the time when the Secretary of the Interior approved the plan of compliance for the Blue Plains sewage treatment plant, which was part of the plan for the District of Columbia.

My information is that the District of Columbia is proceeding with that plan of compliance and with the time schedules that are compatible with this enforcement conference, that the decision has in fact been made, and that the Department of the Interior is not accepting their own decision.

MR. BLAISDELL: I think it has been pointed out, Jim, or at least we tried to point out yesterday, from information that we have concerning population growth, that Blue Plains even with practically 100 percent treatment -- now, I say "practically" -- would exceed the poundage rates that the enforcement conference established.

So, therefore, we feel that some other plan should be adopted, and because of this the proposal was made yesterday to build other regional sewage treatment plants within the Washington metropolitan area so as to relieve the load on Blue Plains.

MR. FREESE: Mr. Chairman, could I make a comment on this?

MR. STEIN: Yes.

MR. FREESE: You seem to be talking about our plant here, and I think I have some reactions to some of the things that were said yesterday.

Mr. Blaisdell this morning, after his remarks in I believe stating that the District had not come forward with any plan of compliance -- and, therefore, I assume that they felt they had to come up with one of their own -- concluded by saying, "I believe that takes care of Blue Plains."

I wish it were that simple. I don't believe that it is.

MR. BLAISDELL: That referred to my statement, not to the problem.

MR. FREESE: I would think so.

We did come up with a plan of compliance a year ago at the enforcement conference or before the enforcement conference. This was submitted to FWPCA at that time with our water quality criteria and was approved by them as an acceptable plan of compliance.

Later on in the year, late summer, Mr. Klein came to us, Mr. Jackson and myself, and said, "I want you to look at something else. We believe there are other ways to do this job instead of going with the plan of compliance that you have submitted and we have approved, we want you to install the physical-chemical method."

We said, "Well, fine. What is that?"

Well, some experimental work was being done in New York somewhere, and it looked pretty good in the laboratory, and he felt that it would be a reasonable thing that we should build a 300 MGD plant based on some laboratory results.

We said, "Mr. Klein, we are familiar with engineering, with research and development. If you are going to insist that we change our plan of compliance and install a different plant, we think we ought to do a little research and find out whether it will work or not."

He said, "Fine. We will build a pilot plant at Blue Plains, and we will conduct the research, and we will find out. How long will it take?"

Our indication was a minimum of 12 months was needed to find out whether this plant, this plan, or this process would have any validity for our sewage in this area.

He indicated that was longer than he would like but that we should proceed.

And FWPCA put up the money to conduct the research, the plant has been built, and research is under way. It started in October.

As far as I know, we have exerted every effort to cooperate with the Federal Government. We have tried to be as reasonable as we know how to provide the best plant that can be built to meet the water quality standards which have been approved by the Federal Government.

It seems to me to be a bit unfair for the Federal Government to come now and say that the District has been negligent, has not ever come up with a plan of compliance, and therefore the Federal Government has stepped in and provided one.

Number one, if this is a plan that we were given yesterday morning, I would like to see the report on which this plan is based. I have not received one yet. I have reason to believe there is none in existence.

The piece of paper that has been given to me is filled with opinions and assumptions and errors. The information I have has indicated it was gotten together very quickly and thrust upon us to try to beat this enforcement conference today.

We had spent a good many years and a good many hundreds of thousands of dollars in developing a plan of compliance. We retained the best consultants that we knew could be retained. Metcalf and Eddy have had Dr. Clair Sawyer on their staff. The consultant previously, Professor Schroepfer, who as most of you know was an expert in the field, was also retained.

Dr. P. H. McGaughey was also retained to assist in giving us the best information we could possibly obtain of the effect of the sewage on the river.

We cooperated with the Chesapeake Support Laboratory in all of the work they have been doing to try to keep abreast of the information that they have made available. We have supplied them with samples. We supplied them with analytical results.

We have done everything within our power to try to do the job that is set before us here.

According to the plan that was developed in 1962 by Dr. Geyer and Dr. Wolman, who I also believe are authorities in this field, the regional plan was adopted by COG and by HUD.

The planning that has been going on cooperatively between the District and Virginia and Maryland has been based upon this original proposal for a regional concept. We are working in that direction.

I don't understand the role of the Federal Government here in unilaterally moving in and rejecting a plan that has been accepted by all the jurisdictions up to this point.

What I would like to know, Mr. Chairman, is what we were presented with. What was the recommendation? What are we supposed to do with it?

MR. STEIN: All right. I think this is fair. Your questions are fair. But I also think possibly, as soon as we can, to get this away we should call on Mr. Vinton Bacon to explain the basis of the proposals so you can see what they are.

Because if we are coming up with specific proposals for consideration of the conference, I think you have a legitimate view.

But here is the situation as I understand it. I have also been here for these long 13 years, not only in 1962.

But in probably the late 1950's, Professors Wolman and Geyer thought up a plan to treat the waste, including such things as gates at the 14th Street Bridge so we could have blue water above them, and a pipe going to the Chesapeake to give them the District's effluent.

And we have had plans in 1962. We have had other plans here. No one is saying anyone is negligent. But without anyone being negligent, that river keeps being polluted.

The question here is: Are we going to come up with a viable plan where we can see that we are going to start building and throwing dirt within a reasonable time? And also, when we finish the job, are we going to be reasonably sure that the river is going to be clean?

This is the issue. I think part of the recommendations which were made-- And again, Mr. Freese, I want to say I have scarcely had any more contact with those recommendations than you have, so I cannot speak to them with any authority. That is why I would like to call on Mr. Bacon.

But as I understand it, these recommendations were based on the assumption that, one, we were not proceeding rapidly enough or coming up with plans which were going to do the job.

Secondly, even if we proceeded under our assumptions for certain works -- and I am not saying we did not all agree to this or go along with this possibly in Piscataway or the District -- we would still have problems. They were suggesting modification.

The other point, as I gathered from Mr. Blaisdell, is that this plan is put forward and the higher degrees of treatment and the waste loads are put forward as recommendations to the conference. If this is not acceptable, then I understand

Mr. Blaisdell to say that within 30 days an alternative plan should be put out by the communities which they feel will meet these requirements and that we should have a firm time schedule on this within 60 days.

This is the way I understood the proposal that was put forth. Is that correct?

MR. BLAISDELL: Correct.

MR. FREESE: Mr. Chairman, I just want to make it clear in my mind. I am not clear yet. Is it the position of your Department that what has been presented here to us today is a viable plan?

MR. STEIN: Let me say again I would like to get Mr. Bacon to talk.

Certainly I think it is a viable plan. I think the implication of answering that in the negative is outrageous. Would you think that the Department of the Interior would come forward with and our technical people would put forward a plan which they didn't believe was viable?

I have never said that the plan that the District had put forward was not a viable plan. It may not have been acceptable to certain people, because you wanted 50-odd acres of the Potomac to fill in and build a plant. But I would not say it was not a viable plan.

I think we should approach that with the notion that these people, our technical people, are proceeding in good faith, as I have always assumed the people in the District were proceeding in good faith.

MR. COULTER: Mr. Chairman -- if I may, Paul --

MR. FREESE: Yes.

MR. COULTER: I think the record shows that there is a plethora of viable plans coming out of Interior for this area. Certainly the recommendations which we agreed to at this conference last year we thought were a viable plan.

Now we are being told on the basis of studies made in one year it is no longer viable.

We thought the plan of implementation that all of the States submitted under the Water Quality Act would be a viable plan for meeting the water quality standards. And certainly at the State level we gave great thought to making sure that our plans of compliance would meet the water quality standards as a minimum.

I am sure that the Secretary of the Interior's good and competent staff went over these plans for the same reason.

At the conference a year ago, and shortly after it, we were talking about and quite hot after the subject of physical-chemical processes at Blue Plains. On March 25 of this year, Secretary Klein appeared before a subcommittee of the Senate on the District of Columbia and, after a newspaper announcement, proposed another viable plan.

If I may, Mr. Chairman, I will read from the Honorable Assistant Secretary's remarks before Senator Tydings:

> "Through the diligent efforts of our respective experts in the District of Columbia and in FWPCA, a way has been found to expand the capacity of Blue Plains to accommodate expected 1975 waste inflows without filling the Potomac. The new treatment process, labeled a biochemical process, can be utilized to raise the capacity of Blue Plains to 309 MGD by the end of 1975 on existing lands.
>
> "The process couples advanced biological techniques with a new physical-chemical treatment and is expected to remove nearly 100 percent of the harmful bacteriological impurities, 96 percent of the phosphates, and 85 percent of the nitrogen present in the wastewater."

Hard on the heels of that came a new viable plan which would freeze the capacity of the Blue Plains plant at 240 MGD, some 8 or 9 MGD less than the plant is now receiving.

So I agree, Mr. Chairman, that there is no question that we have a great number of viable plans. But under law the only viable plan that we should, in my opinion, address ourselves to at this enforcement conference is the legally adopted plan of compliance which represents the standards for these interstate waters.

MR. STEIN: If they come up with a better mousetrap, before you yell "Rats," let's listen to them and see what they have to say.

MR. COULTER: Yes, sir. I am quite willing to listen, and I have demonstrated that.

MR. STEIN: Okay.

MR. COULTER: But --

MR. STEIN: Do you think it would be advisable to move this forward if we could ask Mr. Bacon to come up with his explanation?

MR. COULTER: I would just put this one last thought forward. Anything that Mr. Bacon comes up with, which is a significant departure from the plan of compliance, must start with the procedures outlined in the Federal Water Quality Act to become a duly documented revision of the standards of the interstate waters of the Potomac before it is a legitimate subject for an enforcement conference.

The procedures for changing the standards are spelled out in the law, and I see nothing in the law that would permit an enforcement conference to simply change the plans of compliance.

Certainly I am not entitled to do that under State law.

MR. STEIN: I think we have a charter here to do that.

MR. JOHNSON: Mr. Chairman, --

MR. STEIN: Yes?

MR. JOHNSON: I would point out that time is getting away from us. I wonder if we couldn't put Mr. Bacon on the stand.

MR. STEIN: I would like to. I have been trying to.

MR. JOHNSON: I realize that. I am trying to help you.

MR. STEIN: Is that agreeable?

By the way, Jim, I do not think that I would entirely go along with what you said, because I do think if we want to change on the basis of this conference the treatment requirements, the conferees are empowered to do that as long as we do not degrade the standards. We can go above them. And we have the authority if you want to do it.

I am not saying you have to do it, but you can consider these recommendations here.

MR. COULTER: Sir, I am bound by a body of State law which very clearly spells out what I can do. The law does not visualize that I as a bureaucrat can sit in a conference and change those laws.

Any changes in Maryland that take place must be duly reflected in the plans that are required of each one of our county governing bodies after due consideration at the local level and approval at the State level.

We do negotiate with each one of our owners to try to go beyond the law where we possibly can to get a higher degree of treatment.

But I want to make it perfectly clear that I as an individual in this conference cannot rewrite the laws of the State of Maryland.

MR. STEIN: We didn't ask you to do that. But I want to make it perfectly clear that, after giving the States and interstate agencies an option to do that at a conference of this kind, the Secretary can take action under Federal law, and I think the Secretary is looking to our recommendations as a guide to the kind of action he will take.

Mr. Bacon, would you come up, please?

STATEMENT OF
VINTON W. BACON, PROFESSOR OF CIVIL ENGINEERING,
UNIVERSITY OF WISCONSIN-MILWAUKEE

MR. BACON: Mr. Chairman, did you want me to make a statement, or did you want to simply ask questions? My report was submitted.

MR. STEIN: Why don't you stand on the report and get started, and we will allow the conferees to break in at any point with questions.

MR. BACON: That is perfectly all right.

Mr. Chairman, conferees, and ladies and gentlemen: I think that the issues and questions are somewhat being begged here, in that it is clear what the problems are. It is clear that there are sewerage facilities that are overloaded. It is clear that the river is polluted. And it is clear that standards have been set that have to be met.

And it is also clear in my mind that I have no reason to question the validity of subsequent studies, although I did when working with the Federal people to be sure in my own mind that I was getting what I felt was a valid report. There is no reason to question the model studies or the studies upon which the criteria have once been set and now it appears have to be set at a higher level.

So, to take these issues one by one, the recommendation on the Blue Plains plant I think follows a very sound, logical, mathematical determination. The site just cannot handle the future. And when that happens in any receiving area, the decision has to be made: How can it be relieved?

In this case the recommendation is that it be relieved by having more than one site. And this is not abandoning a regional plan in the sense of the word that a regional plan serves more than one community or a rather vast area, as was pointed out I believe by Mr. Blaisdell.

V. W. Bacon

Los Angeles, in its vast county sanitation district system, has decentralized its plants. In other words, the haul, the pipe length, is just so long, and the concentration of a waste load in an area is just so great that it is logical to divide that load.

Orange County in California did the same thing, and their two plants are only 4 miles apart.

Seattle did the same thing in a secondary plant on the Snohomish River and one on Puget Sound. There are different types of treatment in keeping with the disposal area.

Chicago has three huge sewage treatment plants. They could be -- no doubt about it -- expanded. And the decision was made that that was not the thing to do. So, therefore, sites have been purchased for four other large treatment plants, approaching 100 MGD, the designs have been prepared, and there is going to be a decentralization.

Extensive studies were made outside of the Chicago metropolitan area by reputable engineering firms showing that Lake County to the north and Du Page County to the west should not join in the larger regional system. It was not the thing to do, both from the economic point of view and from the waste load location.

So the recommendation that I made is certainly the trend in many of the metropolitan areas. Certainly it is wise, if you have a limited resource, to assimilate what loads you do have to discharge eventually, to try to have more than one point source of such pollution.

I want to tell this body it did not take -- and you could not make -- voluminous studies to arrive at the conclusion that it is wise to decentralize, particularly when you are at such capacities that your unit cost-benefits of a bigger plant are the same at both locations.

In fact, I would submit to this group that you will have a more efficient, a less costly system by starting out anew with your capacity rather than trying to add to an older existing plant which always has problems of enlargement and expansion and conversion.

This I think can be shown mathematically, although I did not do so in my report. I did not think it was necessary.

I think it is evident that utilizing automation, utilizing instrumentation, utilizing program, that we can build a plant today anew that an older plant cannot be convereted to -- except at unbelievable cost. These studies have been made in other areas.

So on Blue Plains -- and this is no reflection upon anyone -- I think it is only a matter as to where does the capacity go. It is not a matter that Blue Plains is not an efficient plant. It is not a matter that Blue Plains could not be expanded as has been envisioned. It is not a matter that the engineers who have done this work have not come up with good -- you are calling them "viable" -- plans.

I think the thing that is necessary here in this area and that is necessary all over the country is it just happened right soon -- get with it.

The program we recommended says, one, immediately on the primary facilities. That is sound, because your plans are available.

MR. FREESE: Excuse me.

MR. BACON: Yes, sir?

MR. FREESE: I think the chairman indicated it was all right for us to break in.

MR. BACON: Yes.

MR. FREESE: Before you leave this point, I would like to ask you two or three questions if that is acceptable.

MR. STEIN: Surely. Go ahead. I think this would be the best way of handling this.

MR. FREESE: The statement is made in the recommendation I have here that, "The Blue Plains sewage treatment plant is overloaded. Further, it cannot be expanded to treat the waste load which will be generated in the metropolitan area by the year 2000 (420 MGD)* simply because the Potomac Estuary does not have the receiving capacity even if the degree of treatment exceeds

*Biochemical Oxygen Demand.

99 percent removal."

I think from what you just said this is your opinion based on work that has been done at other places.

I would like to comment -- and I don't mean to be impertinent here at all -- but I would like to comment that Hydroscience has been making some very detailed studies and working with Norbert Jaworski here on the effect of concentrated loads, not over the country but in the Upper Potomac Estuary.

In a meeting that we had with them and with the Corps of Engineers just recently, they gave us a great deal of data that indicated that the movement of any of the load from that point of discharge would reflect a decrease in water quality at a point of intake that is being proposed for the water supply of Washington.

This study is still under way. There is a great deal of data being collected. I think FWQA is participating in this.

I think this statement is presumptuous based on a lack of data and a lack of a report that would indicate what the facts may be.

There is another indication here, and again I understand that this group of recommendations is pretty well made up of opinion and professional judgments, but it says, "Of greatest importance, the Potomac will be cleaned up in less time and at less cost" -- by splitting this up into a disseminated program.

I would ask if I may: What in your opinion is the break point of a size of plant where enlargement of the plant no longer becomes a factor in making the plant cheaper?

MR. BACON: That is your first question? I would put it somewhere around 50 MGD -- maybe less nowadays.

You know, the cost curves are asymptotic. They parallel the access as you get up about 50 MGD -- maybe less though.

MR. COULTER: Mr. Bacon, yesterday we heard Federal people tell us that they thought the break point was somewhere between 100 and 200 MGD based on experiences that they have. You are now saying that they are way too high? Is that correct?

MR. BACON: No, I have used that figure too in the past. I think we are improving the designs and the operations such that we are getting economies at the lower figure.

I think they are conservative when they say 100. I think maybe we could get better than that.

You know-- I believe your name is Mr. Freese? Is that right, sir?

MR. FREESE: Yes, sir.

MR. BACON: You said you had three questions. I have heard just one. But I heard an implied question in your first statement.

My opinion and judgment were not based upon studies elsewhere. They were based upon the studies made available to me on the Potomac and the mathematical model by the Federal people.

If there is something equal or better, I should see that too. I understood this was probably the only extensive -- well, I would put it this way -- complete mathematical model made.

I probed quite severely I would say with the Federal people as to the confidence and the extent of this model work and how much it has been checked out through dye studies and other means.

So my opinion is based-- I did not run a mathematical study myself. It would take months to do so, and there would be no need unless somebody wants to discredit or claim discrediting of the Federal model.

So, therefore, when they said that the area cannot take it on the basis of that study, then I accepted that.

You will notice that I do not recommend a change in this area, nor do they, of the 96 percent, 96 percent, and 85 percent removals unless the load goes upwards of 420 MGD.

Again, if it all goes into one area, the degree of treatment would have to be much higher. As you and I know, getting those last 2 or 3 percentage points is when you are really getting down to the expensive dollars.

MR. FREESE: You asked about the third question, and I did have a third question. However, I would indicate that Dr. O'Connor and his people at Hydroscience -- and Dr. Jaworski can correct me on this if I am wrong -- did use the same mathematical model. This is not a separate bunch of data or a separate tool. It is the same one. I am merely saying that the conclusions seemed to be divergent.

The other question that I have is this: In your study, your evaluation of breakpoint of costs here, how much or what consideration was given -- since I didn't have a report, and I think I need one -- to the value of a sewer system, that has been developed over a period of 100 years, to lead flows to a central site?

These sewers have been developed to carry an ultimate capacity of 1,194 MGD to the Blue Plains site, not to any other site.

If we are going to put a plant somewhere else, how do we turn the pipes around to run uphill or go to some other location? What are the costs involved? What sort of detailed study was made of that?

MR. BACON: First of all, there was no proposal to run water uphill, to reverse the flow of the sewer.

In an excellent regional plan, particularly the Anacostia sewer would serve as a good intertie between two plants should they not be able to make fail-safe with all the safety factors. That pipe would certainly continue to be used. It would not be used to the capacity that it is now, but it would serve certainly as a factor of safety between two large facilities for momentary breakdown -- and when I say "momentary breakdown" it may be a matter of a few days -- where one plant would have to take the load and not operate at quite such efficiency.

Secondly, the thing that has not been brought out here yet is the fact that, as I understand it and have studied it and have talked to your engineers, Greely, Hansen and others, you have a combined sewer and overflow problem. Any of these sewers, if the load is relieved upon them, will certainly serve better in a system of combined sewer control or for storage.

It is not a matter of abandoning those sewers, and it is not a matter of their not having a use in the final system if these are interlocked as they should be. I am talking about two plants now, but maybe it is an interlocking of three or four plants before you are done.

You notice I made the statement -- and I confidently believe this -- that if any metropolitan area is not thinking in terms of 100 years and then structuring its facilities we'll say by the 20-year mark-- In engineering we used to take great pride in designing a treatment plant for 15 years and a sewer for 40. Well, that day has come and gone, in my opinion.

So, therefore, on these pipes, I can't tell you and I don't think anyone else can tell you how they will fit into the scheme 50 to 100 years from now. But they are not going to be wasted, even next year, with the establishment of more than one plant.

MR. FREESE: Professor, our studies do indicate what these sewers will be used for 100 years from now. Our studies also indicate that the use of these sewers for stormwater is not practical.

I think unless there are better studies, more extensive studies available to prove that to the contrary, we have gone into that in great detail.

MR. BACON: These, of course, sir, are matters of judgment, matters of long-range planning.

In the area in which I have been working, Chicago is building a 4-mile-long, 17-foot-diameter tunnel, 250 feet underground, and it is basically for conveyance and storage, the two together.

The Sanitary District of Chicago is building at a cost of over $13 million 2 similar sewers also 250 feet underground for conveyance but storage also.

Now, these are not the eventual solution to the combined sewer problem, because the storm that it will contain is somewhere between 5 and 10 years. And that is not the solution in a metropolitan area.

The design, as I said, even for the stormflow and flooding, should be in terms of a storm of record, or let's say the 100-year storm.

So apparently the studies contradict one another, and I can only say, from what I have experienced and what I have seen, the sewer can serve the dual purpose of conveyance and storage. We believe as far as the combined sewer problem is concerned that the underground conveyance and storage, whatever depth you choose, is the only solution. Separation is not the solution.

So just in my opinion -- and I emphasize again these are experience and judgment factors -- you are just going to be getting some capacity resting there. You will have it "in the bank."

MR. FREESE: Excuse me, Professor. I did not mean to be contradictory. We have had an examination of the so-called Chicago plan for the City of Washington. We believe this is a possible solution. I merely say the pressure system is not adequate to store significant volumes of stormwater runoff and will not lend itself to that solution of that tremendous problem.

MR. BACON: I am sure of that. You would have to have some kind of surface or underground storage in addition.

I would like to point this out. I think it is germane to this conference and germane to your basic philosophy which will control what you are going to do. That is, you are going to have to take a plan that is looking -- as I said I believe in points 4 and 5 -- to the 100-year point.

I just do not think you can say that what you are doing today is the ultimate or the answer. I believe you are going to have to -- and I would underscore this many, many times -- get a long-range program.

I started to say, before your three questions, that the recommendation to me was very, very practical from an operating point of view and that the primary facility should be under way immediately and completed by the end of 1971.

The secondary facility should go under design now, be completed within a year, and that would allow you a year and a half for construction, and they should be completed in 1972.

And there is the recommendation that the design for the advanced waste treatment or tertiary, or whatever you want to call it, would start not now but within the year, meaning that it could start one year from now but be completed within a year. That recommendation was in recognition of the fact that maybe you people and maybe the Federal people are not quite certain yet what would be the best design for the advanced waste treatment.

But there is not a thing in this report that says if a State agency wants it before that time that it cannot command it right now.

I would point out that there comes a time -- I don't care what business you are in -- when research has got to stop and design and construction have to start. You are going to make some mistakes, and you are going to spend some money that you may regret later on. But to use the excuse that-- And all of us have done this, and I am not pointing the finger at anyone. I was in charge of the California State program for 7 years, the entire State program, in water pollution control, and I know we have done this sort of thing.

There comes a time when you have to say you have got the tool. If there is a better tool than what is being proposed and researched by the Federal people -- and there is a lot of research being done by non-Federal agencies -- that tool is I am sure available to any one of us.

So, therefore, I made the recommendation-- And, believe me, I had pressures to say immediately, to say go right now. And I believe all of the technicians agree that a year under forced-draft research will come up with some kind of answer so that you can proceed with your tertiary or your advanced waste treatment.

I know of very few community metropolitan areas in the United States that are not going to have to do that very soon, including Detroit, Chicago, and others, that are under a 10-year, 1978 deadline.

So, therefore, we recommended a year before design is compelled to be started. We wanted a touchdown point. This was the recommendation -- a year for design, and construction to be completed by December 31, 1975.

There is not a thing in the book, as I understand it, in this area, the States or the Federal Government, that does not allow a tighter, shorter schedule if the States want to do that.

I want to go back to another point, Mr. Freese, about the sewers. The system that I was involved in, they had embarked upon a $110 million sewer paralleling program and abandoned that system in lieu of something better that developed along the way.

I think we have to remain very, very flexible and adjust as we go along.

There is no doubt in the world some moneys are going to be spent that we will regret later on. It is bound to happen. But we just have to do the best we can.

The thing I think we have to keep in mind is that cleanup has got to come about. We have been talking about this since 1900 -- and since the 1920s when sewage treatment became available. It is time that this curve starts downward, and downward quickly, and I think this is the thing to do.

Now, on the Piscataway --

MR. FREESE: Professor, I am sorry. I should apologize for this.

MR. BACON: It is all right, sir.

MR. FREESE: But I am greatly disturbed by what has been said. Essentially, I think what has been presented here is a new plan of compliance and a new time schedule.

As far as I know, our plan has been accepted, our time schedule has been accepted, and now the indication is here we should change all that and start over anew.

If we are to do that, if that is what we are being asked to do, it seems only fair to me that we should know what we are talking about.

We are being told here to put in systems and are being given construction times under which to operate, with no indication of what processes we are talking about, how much they are going to cost, how they should be designed, and upon what research they should be based.

We have instructions from Mr. Klein on what research to do and how to do it and what to come up with that involve work that has been done under research for the past year or two.

I just do not see how we can be expected to throw all that out the window and come back and say, "Okay, we want secondary ability by December of 1971." We don't even know what we are going to build.

MR. BACON: Secondary is 1972.

MR. FREESE: All right.

MR. BACON: Excuse me, sir.

MR. FREESE: I don't mean to argue.

MR. BACON: Primary treatment is known. We know what it will do. Secondary treatment is known. We know what it will do. If you want to take a chance on using tonnage oxygen, do so, but your engineers are the ones that will tell you whether they want to go standard aeration or tonnage oxygen aeration. That is known too. There are no unknowns there.

Thirdly, the unknown is on the advanced. I acknowledge that, and others have, by saying take a year to finish work that is being done.

Now, that is an unknown. But if I were compelled as a practitioner to make a decision tomorrow and my Board told me to do it, I could do it. It might not be the best, but it can be done right now.

I think we have to get out of our thinking that the tools that we have asked for-- And you understand, gentlemen, I made the recommendations out of my mind. I was asked to give them. They are not compulsory upon you or anybody else. But it does seem to me the purpose of the conference and its reconvening is to take advantage of any new developments or thoughts. Not to do so would be to say, "Well, we are going to make the decision for the next 20 years, and we are not going to take advantage of any new findings."

Again, we are going to be upgrading just by virtue of what the society and the community demand.

MR. COULTER: Mr. Bacon, --

MR. BACON: So I think when we get to Piscataway that it is as simple as studies that I accept and believe have shown an upgrading right now is in order. Although I am not going to pass upon the legal framework of these conferences, although I have been through a great number of them in Portland, Oregon, on the Columbia River, and in Chicago, and on Lake Michigan, it seems to me that it is the purpose of the conference to reconsider the problem and to make changes if changes are indicated. And I became convinced on Piscataway that changes are indicated.

That is not entering the argument at all where the outfall is at the present time. The outfall is at the head of the embayment, and that is all I addressed myself to.

Yes, sir? I am sorry. I interrupted one of you.

MR. COULTER: Could I ask a question, Paul, if I might interrupt here?

Actually, Mr. Bacon, we are trying to get at the basis of the assertions that were put to us in the form of a report which purportedly came from you.

MR. BACON: Not "purportedly." It did, sir, if you have this document (indicating). (See p. 240a)

MR. COULTER: Then there must be some factual basis behind these assertions.

THE UNIVERSITY OF WISCONSIN - MILWAUKEE
Milwaukee, Wisconsin 53201
College of Applied Science and Engineering

May 19, 1970

RECOMMENDATIONS TO SPEED ACTION ON POTOMAC CLEANUP

Dear Mr. Klein:

1) The Blue Plains Sewage Treatment Plant is overloaded. Further, it cannot be expanded to treat the waste load which will be generated in the metropolitan area by the year 2000 (420 MGD* estimated) simply because the Potomac Estuary does not have the receiving capacity even if the degree of treatment exceeds 99 percent removal. The logical solution is to remove much of the load from suburban Maryland, requiring that area to provide waste treatment plant capacity over and above its capacity rights at Blue Plains. Thus, both land and treatment capacity at Blue Plains will be reserved for the core area, the Potomac (Dulles) Interceptor area, and the capacity to which Maryland and Virginia are entitled. Of greatest importance, the Potomac will be cleaned up in less time and, in my opinion, at less cost.

*Million Gallons per Day

The capacity at Blue Plains should be leveled off at present at 240 MGD with new primary additions to be placed under construction immediately with completion by December 31, 1971, with new secondary additions to achieve 90 percent

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removals by December 31, 1972, and with advanced waste treatment by December 31, 1975, to achieve nutrient and organic removals. Such a program is practical. It should meet the standards of 96 percent removal of BOD*, 96 percent removal of phosphorus, and 85 percent removal of nitrogen. At 240 MGD, Blue Plains should have adequate capacity into the mid-eighties.

*Biochemical Oxygen Demand

2) The degree of treatment proposed for the 30 MGD Piscataway Sewage Treatment Plant by past enforcement conferences is not adequate to protect Piscataway Embayment from eutrophication. Newly completed FWQA scientific studies, including mathematical models and dye dispersion studies, show that the present enforcement conference removal requirements of 96 percent BOD, 96 percent phosphorus, and 85 percent nitrogen are adequate only to 15 MGD. Respectively, these removal requirements should be increased to 98 percent, 98 percent, and 95 percent for a 30 MGD plant. The timetable for accomplishment should not be changed.

3) Beyond the 67 MGD capacity rights which Maryland has established at Blue Plains, no further connections to the WSSC system discharging to Blue Plains should be allowed. This need not inhibit development in the WSSC area. So-called package waste treatment plants can be installed as temporary

treatment while regional facilities are being designed and constructed. They should be operated by WSSC, and stream standards must be met. The same applies to Virginia installations.

4) Solids disposal does not impinge directly upon the Potomac River and Estuary. But it can be a source of air pollution, and it can be costly, thus diverting monies from the basic treatment process. Disposal of digested sludge onto crop lands on a crop rotation basis should be given consideration *now*. Land should be purchased *now* for this purpose, and held until needed. A loading factor of 20 dry tons per acre per year is a conservation design criterion. Land disposal and utilization should prove less costly, should free some of the acreage at Blue Plains and other plants, and will close the organic cycle making beneficial use of the solids.

5) All agencies should attempt to envision their ultimate treatment plant site requirements, and sufficient land for this purpose should be purchased *now*.

In arriving at the above conclusions, I worked very closely with your staff, with the experts from FWQA's Technical Support Laboratory at Annapolis and the Charlottesville Regional Office, and with Eugene Jensen, FWQA Assistant Commissioner for Operations. Field trips were made to Blue Plains and to potential sites for regional treatment plants.

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Attached are more detailed findings and recommendations for action to abate water pollution in the Washington metropolitan area reach of the Potomac and tributaries. They are under the headings: The Blue Plains Problem, The Piscataway Problem, and Advanced Waste Treatment Package Plants.

It has been a pleasure working with you and your cooperative and competent staff.

Sincerely yours,

(Signed)
Vinton W. Bacon
Professor of Civil Engineering

Honorable Carl L. Klein
Assistant Secretary for
Water Quality and Research
Department of the Interior
Washington, D. C. 20240

Enclosures

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FINDINGS AND RECOMMENDATIONS FOR ACTION TO ABATE WATER POLLUTION IN THE WASHINGTON METROPOLITAN AREA REACH OF THE POTOMAC AND TRIBUTARIES

I. THE BLUE PLAINS PROBLEM

I. FINDINGS:

1. The Blue Plains plant of the District of Columbia, which handles nearly 80 percent of the metropolitan area sewage load, is overloaded. Its design capacity is 240 MGD; its present load is about 250 MGD, with one-half of the sewage originating outside D.C. (Md-114 MGD; Va.-11 MGD; D.C.-124 MGD)

2. No reading of existing agreements under which D. C. accepts sewage from other jurisdictions can yield an interpretation to the end that D.C. is obligated to overload its plant. Likewise, such agreements cannot be interpreted to hold that jurisdictions outside D.C. are relieved from the obligation to manage the sewage problems created within their own boundaries. In either case, the Potomac is the victim.

3. The Maryland counties represented by the Washington Suburban Sanitary Commission (WSSC) have established certain "capacity rights" to treatment of a portion of their sewage at Blue Plains through WSSC's contributions to that plant's construction. Such "rights" are calculated at about 45 MGD and should remain so reserved.

4. Other "rights" to Blue Plains capacity arise from legislation authorizing the Potomac Interceptor, amounting to 22 MGD for WSSC and 42 MGD for Virginia areas when the loads reach full design capacity. These should also remain intact.

5. Beyond these outside "capacity rights," no obligation arises for D.C. to accept sewage flows from outside its boundaries -- to the detriment of the river. Beyond this point, too, the credibility of continuing adherence to the single large plant approach as the best regional solution is in serious doubt.

6. On the basis of scientific studies and approved water quality standards for the metro segment of the Potomac Estuary, it is apparent that the sewage load from populations connected to Blue Plains will have to be reduced, or virtually 100 percent treatment will have to be achieved. As of 1 year ago, an excess load equivalent to the sewage from 230,000 people was imposed on Blue Plains and the 4 other smaller plants in the metropolitan area.

II. RECOMMENDATIONS:

1. The present site at Blue Plains should be reserved first and foremost for D.C. sewage, including adequate treatment for excess flows.

2. The design flows allotted to WSSC in the Potomac Interceptor (22 MGD) should continue to remain reserved, and the flows from all other WSSC sources to Blue Plains should be limited

to 45 MGD, for a total of 67 MGD thus to be treated at Blue Plains.

3. The Blue Plains plant capacity should be retained at 240 MGD for the present; with all plant components brought up to that capacity, and with installation of tertiary facilities, Blue Plains should thus have sufficient capacity to beyond the year 1980 and meet water quality standards. (See Table A)

4. WSSC should immediately commence design and construction of facilities for Tertiary treatment in excess of 67 MGD, as required to meet water quality standards. No further connections to WSSC system discharging to Blue Plains should be allowed.

5. Any advanced waste treatment package plants utilized shall be considered temporary solutions and shall be operated so as to meet water quality standards.

6. The design and construction effort leading to tertiary treatment at the 240 MGD Blue Plains facilities should proceed on the following schedule:

(1) Primary Facilities -- put to contract immediately for the 240 MGD capacity, including excess flows.

(2) Secondary Facilities -- begin design immediately and complete within 1 year; complete construction by 12/31/1972.

(3) Tertiary Facilities -- within 1 year, begin design; complete design within 1 year; complete construction by 12/31/1975.

Note: If these recommendations are followed, the capacity at Blue Plains can be leveled out at 240 MGD for secondary treatment; with the addition of tertiary facilities, this capacity will be adequate to some date beyond 1980, will meet water quality standards, and will allow for orderly planning to accommodate future needs anticipated beyond 1980.

Table A

Design Flows at Blue Plains with WSSC Inflows Restricted

Flows from:	Actual Present Inflows (1970) (MGD)	1980 (MGD)	2000 (MGD)
District of Columbia	124	135	180
Potomac Interceptor:			
Maryland	1	10	22
Virginia	4	14	42
Other than Potomac Interceptor:			
Virginia	7	6	8
Maryland (WSSC)	113	45	45
Total to be treated at Blue Plains Plant	249	210	297

*Formula by which 45 MGD capacity rights of WSSC at Blue Plains was determined.

$$\frac{\$5.5\text{M invested by WSSC at Blue Plains}}{\$29\text{M total investment in Blue Plains from all sources}} \times 240 \text{ MGD} = 45\tfrac{1}{2} \text{ MGD.}$$

II. THE PISCATAWAY PROBLEM

Findings and Recommendations:

1. Newly completed FWQA scientific studies, including mathematical model prediction and dye dispersion results, have produced findings to show that the present Enforcement Conference removal requirements of 96 percent of phosphorus and 85 percent of nitrogen are not adequate to prevent accelerated eutrophication conditions with the 30 MGD Piscataway treatment plant being planned by WSSC.

2. These removal requirements would have been adequate for a 15 MGD plant, and would have afforded sufficient protection for Piscataway Embayment.

3. Thus, the Enforcement Conference will need to impose more stringent removal requirements. For the 30 MGD plant size, these will have to be not less than 98 percent BOD_5, 98 percent phosphorus, and 95 percent nitrogen.

4. There is no reason to change the time frame for accomplishment of these levels of treatment, and the timing requirements specified by the Enforcement Conference should be adhered to and met.

5. Because of the very high degree of sensitivity of Piscataway Embayment waters to the adverse impacts of waste and nutrient inputs, adequate fail-safe mechanisms, including but

not limited to standby power facilities, multiple treatment trains, absence of bypasses, sampling, analysis, warning systems, etc., should be provided for.

III. ADVANCED WASTE TREATMENT PACKAGE PLANTS

FINDINGS AND RECOMMENDATIONS

1. Many Washington metropolitan area sewage treatment plants are presently overloaded and thus aggravate an already difficult pollution problem in the Potomac and tributaries. In this setting of explosive population growth, local governments must utilize the full range of technological tools -- including interim solutions -- to minimize damage to the River until permanent, adequately-sized facilities can be put in place and eliminate such overloads.

2. Package treatment plants can be an effective interim solution to relieve overloading situations without calling a total halt to all further growth. Most such plants are designed to produce effluents equivalent to secondary treatment, i.e., up to 95 percent removal of BOD_5 and suspended solids. They can be augmented, however, to yield a tertiary-equivalent type of effluent by adding sand/vacuum filter processors, lagoons, chemical precipitators for nutrient removals, etc. For the effluents discharged in the Washington metropolitan area to

the Potomac and tributaries, such tertiary-equivalent (advanced waste) treatment is a must.

3. Size and Performance: Package treatment plants can range in size up to 1 million gallons per day (MGD), and can be used in parallel to serve more people. . . . A 50,000 GPD unit can treat wastes equivalent to the sewage from 500 people, or 143 families (3.5 people per family). . . . A 1 MGD unit can treat sewage for 10,000 people, or 2,857 families.

4. Other Characteristics: Package plants are portable and can be moved to next location when permanent facilities are completed. . . . The space thus vacated (usually concrete slab) reverts back to the builder and original intended use (house, etc.).

5. Cost and Cost Burden: Bid prices submitted in February 1970 for a package plant to be installed at Chicago, yielding 95 percent BOD and suspended solids removal, indicate a total cost of $100,000 for a 50,000 GPD unit, or $700 per family; this is equivalent to a 2.3 percent increase in the cost of a $30,000 house if the entire cost were ascribed to that single subdivision. For a 1 MGD unit serving 2,857 families, the indicated cost would be $1 million, or $350 per house, again disregarding the repeated use of the unit at other locations. It is deemed equitable that the cost burden for such interim plants should be borne by the developer who creates the housing market which attracts the people who create the sewage load.

(The costs given above will increase somewhat through addition of nutrient removal facilities, as required.)

6. Operation and Supervision: Proper operation and strict, continuous supervision are essential to the success of this interim technological solution, and must remain the responsibility of the local sewage authority. Under no circumstances can a developer, or other private entity, be allowed to operate a package plant.

- - -

I would like to start with the first one which you made in your report, in which you say the Blue Plains Sewage Treatment Plant is overloaded. I think we all agree that it is approaching overloading. But I would like to ask you this question at this point. What is your opinion of the capacity of the Blue Plains Treatment Plant as built and as in place right now?

MR. BACON: I was given the figure of 240 MGD as the design capacity and the average annual load of 249 MGD.

MR. COULTER: So that this was not on the basis of a study that you made of the unit processes in Blue Plains, but, rather, information which you received from somebody?

MR. BACON: This is from the Federal people, yes, sir.

MR. COULTER: In the documents which have been published in the records of this hearing, there is talk of the capacity being 290 MGD. Were you aware of or did you look at the record of the proceedings of this conference and that kind of background information?

MR. BACON: Yes, I did. In fact, I went over them rather extensively. I know that when you are figuring treatment plant capacities there are many ways to figure them.

MR. COULTER: Yes.

MR. BACON: In my judgment, this seemed to be the consensus among those involved in this conference and in the testimony.

MR. COULTER: Well, all I am pointing out is that in the document which describes unit process by unit process in the Blue Plains Sewage Treatment Plant, which was presented to this conference, going right down the line with chlorination, grit removal, aeration, process by process, it would lead me to believe that the design capacity is 290 MGD. It would appear that in the paper shuffle and in the interpretation we just lost 50 MGD of capacity.

Actually, your 240 MGD or the 290 MGD in the report has no bearing on the circumstance that does exist. The plant is now receiving peak loads, as I understand it, that require bypassing.

If I understand the report, that is because the primary facilities can only take 300 MGD without bypassing.

But getting on to the next sentence, your assertion is --

MR. BACON: May I interrupt you, just a minute, please, sir, if I may have the privilege to comment?

MR. COULTER: You certainly may.

MR. BACON: If it is 290 MGD, then the situation is better off than I thought, and less expenditure will be required at Blue Plains. But that can all be checked out as to the actual day-by-day annual average daily flow.

I am aware that it is peaking upwards of 300 MGD at times.

MR. COULTER: All right, sir.

MR. BACON: But if you are correct and the average annual daily capacity is 290 MGD, then the situation was portrayed to me in a little dismal way, and I would be happy for the taxpayers of this area that they will not have to put out quite as much as I thought.

MR. COULTER: I will be glad to refer you to the documents and the report, and then I presume you could make the engineering evaluation from this, sir.

The next statement is, "Further, it cannot be expanded to treat the waste load which will be generated in the metropolitan area by the year 2000 (420 MGD estimated)* simply because the Potomac Estuary does not have the receiving capacity even if the degree of treatment exceeds 99 percent removal."

In making that assertion, Mr. Bacon, in this section of the river, let's make sure that we are all talking about the same allowable load.

The conference a year ago, and as far as I know right up to this moment, was proceeding on information, and very good information, generated by the Federal Water Quality Administration and other people. And I think I have the figure for the ultimate demand in this section of the stream. The figure that I have is 57,000 lbs.

Is this the figure that you used in making this determination?

*Biochemical Oxygen Demand

MR. BACON: I think the figure was in the neighborhood of 12,000 lbs. to 16,000 lbs. of allowable 5-day BOD, was it not? It has been some time. But I believe that that is the total load that the entire system can take. I have no such figure in my mind ar 57,000.

MR. COULTER: I believe, sir, if you go back and carefully look at the basis of these figures, you will find that the permissible ultimate oxygen demand is 57,000 lbs. and that arriving at the 16,500 lbs. of allowable 5-day BOD, a number of corrections were made, including one of some 33,000 lbs. of ultimate demand for nitrogen.

I want to know if you took these kinds of things into consideration when you made the statement that even if you had 99 percent removal, we could not handle 420 MGD at that point.

MR. BLAISDELL: May I ask for clarification there, Jim? You are talking about the loading from all the plants in the metropolitan system when you used that figure, not Blue Plains itself?

MR. COULTER: I believe that I am talking about the permissible ultimate oxygen demand which, through a series of computations, including assumptions and subtractions, led to an allowance of 16,500 lbs. BOD_5.

MR. BLAISDELL: For all the plants in the metropolitan area?

MR. COULTER: I think it would be well, if Mr. Bacon cannot clarify it, to have Dr. Jaworski clear it up.

MR. STEIN: Do you want to reply, or do you want us to talk to Dr. Jaworski?

MR. BACON: I have based my conclusions upon a review of their work and their figures, so I think you should call upon Dr. Jaworski.

MR. STEIN: Let's take a 10-minute recess first.

(Whereupon, a recess was taken.)

MR. STEIN: Let's reconvene.

We will go to about 12:00 o'clock again today.

Dr. Jaworski.

STATEMENT OF

DR. NORBERT JAWORSKI, CHESAPEAKE TECHNICAL SUPPORT LABORATORY, ANNAPOLIS, MARYLAND

DR. JAWORSKI: Yesterday Malcolm Hope said that he remembers clean air and dirty sex and that now sex is clean and air is dirty. Well, I was born and raised at a time when air was dirty and sex was dirty, so I am in real bad shape. (Laughter)

To get back to Mr. Coulter's question, here are the assumptions. These have been documented in one of our technical reports that was presented at last year's conference in November.

The flow sequence at Great Falls was 705 cfs. This is flow designed in the standards of the District of Columbia. At that flow, the temperature used was 29° C. This is a statistically valid figure for the months of August and September.

With that flow and that temperature it resolves into a saturation DO of 7.7.

Based on benthic uptake studies by our staff and by those in England, an average benthic rate is about 3 grams per square meter per day. And we dropped that thing back down allowing for a cleanup of suspended solids and better reduction of BOD down to 1.

Okay? This allows for a background oxygen uptake of 0.7 mg/l.

Using a DO standard of 5 mg/l, we have 2 mg/l of dissolved oxygen to work with. In other words, we can drop the DO from 7 to 5 mg/l by our wastewater discharges.

Using this figure and going back to our model, the ultimate oxygen requirements for loadings can be 57,000 lbs. of UOD, which is --

MR. COULTER: Excuse me. 57,000?

DR. JAWORSKI: 57,000 lbs. of UOD, which was quoted by Mr. Coulter.

In 1968, when we did all these calculations -- and

I have checked them many times since -- I went to our research people and said, "What can we do in terms of nitrogen removal and carbon removal in terms of satisfying the carbonaceous and nitrogenous components of wastewater?"

For those of you who are not familiar with it, we have two components that require oxygen -- the carbon and the nitrogen -- the nitrogen in the form of ammonia being oxidized to nitrates and the carbon to CO_2.

We had two components, so there are "n" number of possibilities of different removal frequencies or levels to get to the UOD reading of 57,000 lbs.

So I went to the R & D boys, and they told us the best we could possibly think of was 85 percent of TKN or the nitrogenous demand.

Okay. With that loading as setting the upper limit on nitrogen, that would give us about 35,000 lbs. of UOD for nitrogen. Subtracting 35,000 lbs. from our total, we have somewhere around 22,000 lbs. of carbanaceous removal, a loading to short for.

So this gave us the 96 percent removal of the 5-day BOD and 85 percent removal of TKN. And this is what we have set for zone 1 of the Upper Potomac tidal river system. That goes from Chain Bridge down to Broad Creek, a zone of 15 miles.

MR. COULTER: Dr. Jaworski, as a matter of clarification, I have slightly different figures. I have 33,000 lbs. of ultimate nitrogenous demand remaining after the 85 percent nitrification, which gave 24,000 lbs. instead of 22,000 as the ultimate. But we could adjust those small figures.

DR. JAWORSKI: Well, it depends on your conversion rate of TKN to ultimate UOD. Some use 4.57. Some use 4.4. I use a little higher figure.

MR. COULTER: Same ballpark.

DR. JAWORSKI: Right. The big figure is the ultimate UOD of 57,000 lbs.

Okay. Now, there are a couple of things. I would like to go one step further. If you take a look at Technical Report No. 39 and turn to page IV-21 -- this is the Anacostia report which we will get into later -- I think it clarifies one more point.

MR. COULTER: What page?

DR. JAWORSKI: Page IV-21. That is for zone 1 and specifically for the Blue Plains facility.

Using a 1970 Q of 232 MGD, a 1980 Q of 309 MGD, and a year 2000 Q of 419 MGD, the removal figures based on the allocation to Blue Plains are given there.

You can see for 419 MGD the removal figures for Blue Plains would be 98 percent removal of 5-day BOD, 93 percent removal of nitrogen, and 98 percent removal of phosphorus.

These figures are what would be allocated to Blue Plains under these conditions.

We did not incorporate any variation in these figures in terms of treatment efficiency, or we did not include any contribution from storm sewers or overflows. I think this is where the difference between Mr. Bacon's figures and our figures occurs. We are giving exact figures as we utilize under the conditions we gave.

MR. COULTER: Dr. Jaworski, in the detail that we are getting into, I would like to make a plea that in the technical report, as well as giving a percentage removal, you give the pounds or concentration remaining. Because the percentage removal is depending on an assumption of what goes in, whether it is brickbats or sand or silt.

DR. JAWORSKI: We give both.

MR. COULTER: Fine.

DR. JAWORSKI: Those are given there. On that page you will see the residual in terms of concentration for the 3 population benchmarks. Yes, we do this both ways.

MR. STEIN: Does that clarify the point?

MR. COULTER: It clarifies the point of the allowable loading but does not clarify the point where the statement came from that we could not meet 420 MGD even with 99 percent removal.

MR. FREESE: Mr. Chairman, --

MR. STEIN: Just one moment. Does anyone want to respond to that question?

MR. BACON: This was on the basis of information from the studies. If it is going to be raised or lowered, it will depend upon their model study. As you can see here, there usually seems to be more than one opinion as to what the figures are.

I based my conclusions on the Federal model study and the reports they gave to me.

MR. COULTER: So you know it is your report, it is essentially the Federal calculations that you are using to make this study?

MR. BACON: Yes, sir. And I want to make one thing very, very clear. If there are other studies, either paralleling, equal to or better than, I would like to see those too.

But this is all I had to go on, and I was under the impression this is all that is available to this sophistication.

MR. HOPE: Professor Bacon, may I ask a question? In the light of what Dr. Jaworski has said, would you feel that possibly some change in your statement might be indicated at this time?

MR. BACON: No, I would not. Actually, this supports a conclusion that has been reached by me in many other areas in the past, and it goes back to this total regional plan.

Because we knew the sewage treatment plant usually would give us problems and because we wanted to remove this to a single area, we tended to put them together into one big plant, suffering at one point and, of course, in many cases, in getting an economy of operation.

But in the future the water that is going to come out of these treatment plants is not a waste. It is a resource. It can be used and reused in the area of origin, and should be.

If we do not accept that concept, if we are accepting the concept that the water is to be gotten into the ocean just as fast as it can with a one-through use, then you are operating on that philosophy. If I had that philosophy I would not have made that statement. But I do not have it. The water has to be retained in the area as long as it can be, and it has to be reused. And I understand from casual conversation that you do have a water shortage problem in this area, which would certainly indicate that you should, not only from the waste disposal point of view, but from the water point of view, keep it in the area of origin as long as possible, treat it properly, and reuse it.

MR. HOPE: Drinking water supply?

MR. BACON: I did not say that, sir. Water treated to this degree and properly disinfected will be suitable for all beneficial reuses except back into the tap system.

MR. HOPE: All right.

MR. BACON: That includes low-flow augmentation, underground replenishment -- you know, all the uses -- fish and wildlife, recreation, etc., irrigation, industry.

I do believe if this is not a part of the thinking of this conference or any other conference, then, of course, you will draw a conclusion other than what I have here as to the desirability of one or more upstream plants.

MR. FREESE: I wanted to ask a rather technical question of Dr. Jaworski. I am sorry I did not catch him before he left, but he can maybe answer it from there.

As I understood it, you have treated this section of the river as one piece of water. Is that correct? From Chain Bridge to Broad Creek? Is that correct?

DR. JAWORSKI: We have it zoned in a 15-mile zone, but in our mathematical model we have it in half-mile and sometimes quarter-mile zones.

MR. FREESE: Right. The question I would ask is strictly for clarification. Have you done the studies that indicate what the quality of water would be at Chain Bridge if Professor Bacon's recommendation is followed as compared to the officially approved plan of implementation that we have proposed?

DR. JAWORSKI: This goes to a study that Mr. Freese made reference to earlier. There is a joint study between the U. S. Corps of Engineers and ourselves to look at the water resources of the estuary or the upper tidal system.

We are in current communication and current unison with them. But we have developed for or applied to the Potomac Estuary a real-time mathematical model which will allow us to bring into the system the tidal fluctuations and the idea of branching around the various islands. We have made a second dye release, and we are very pleased with the results of the new model, but --

MR. STEIN: Mr. Jaworski, may I interrupt you?

DR. JAWORSKI: -- but we will have the capabilities of looking into that very question. But we have not made them yet.

MR. STEIN: Oh. Well, that is the answer we want then.

DR. JAWORSKI: Right.

MR. STEIN: I know your methodology is very interesting to everybody.

DR. JAWORSKI: But I think the thing is we are about 6 months away from the final result. We have not made that specific, but we will.

MR. STEIN: I think the burden of Mr. Freese's question is if we are going to put plants at other points, other than Blue Plains, and keep the capacity of Blue Plains now, will this have an adverse effect on water upstream, say at Great Falls or Chain Bridge?

Do I take it we do not know the answer to that question now?

DR. JAWORSKI: We do not. We have some preliminary results. Hydroscience has published a report, but I am not in a position right now to comment on their report until we have our data.

MR. FREESE: Thank you. And that is the case of all the other research you are doing right now, too. We need another 6 months.

DR. JAWORSKI: You said it. I didn't.

MR. STEIN: I know Mr. Coulter wants to get going.

But this I have to agree with Mr. Bacon on. I have never been in one of these cases, nor do I think any administrator has -- I will bet no automobile manufacturer or paperclip manufacturer or steel manufacturer -- or ever gotten together with the research people where they did not say they need another 6 months to sharpen their criteria.

Mr. Coulter.

MR. COULTER: I still, Professor Bacon, would like to pursue this first assertion that we cannot treat 420 million gallons per day at Blue Plains. It would seem to me like there is a tradeoff between several things that would reduce the ultimate oxygen demand at that point.

I made a table -- and any darned fool can make tables, as I have just illustrated -- that shows that at 240 MGD, using the figures that we have just gone over. the ultimate oxygen demand in the effluent would have to be something in terms 32 parts per million.

It seems to me that technology that produces water from a cleansing plant that is an asset to the water system, which we fully subscribe to, can go far beyond 32 parts per million in ultimate demand.

In fact, my straight-line drawing here shows that it is not at all out of the question to get down to 12 or so parts per million that you would have at 420 MGD.

I just am searching to find how you reach the conclusion that there is a limit tc the capacity of a sewage treatment plant at a given point, when we both agree that after a certain degree of cleansing the water at that point becomes an asset and not a deficit.

STATEMENT (RESUMED) OF

VINTON W. BACON, PROFESSOR OF CIVIL ENGINEERING,

UNIVERSITY OF WISCONSIN-MILWAUKEE

MR. BACON: What is your question?

MR. COULTER: Well, --

MR. BACON: I agree with what you said. It is an asset, not a --

MR. STEIN: Let me rephrase this, because I sense this is the key point, Mr. Bacon.

If there has been at least a recommendation made that we limit the capacity of Blue Plains to 240 MGD -- and then you indicated perhaps it could be 290 MGD --

MR. BACON: For the present it says.

MR. STEIN: For the present. Now, I think the question in everyone's mind is why should that be the limit? Why shouldn't it be, say, rounded off at 300, 315, 309? Why particularly those figures?

MR. BACON: If you look under Table A on page 2, you will find that it is the figure that we estimated-- We estimated an average annual daily flow in 1980 at 210 MGD and for the year 2000 at 297 MGD. This is from the engineering reports that have been made on this particular system. We rounded off at 240 MGD because that is the present plant capacity.

It would mean that you would just bring everything up to that. That is the figure I have been working with. You would bring everything up to that level.

I said mid-1980's. The final chart that was drawn showed 1987. But say mid-1980's.

So, therefore, you have literally a 17-year design period by simply bringing the plant up to one level.

MR. STEIN: Let me see if I can do this, because I think it may cut through a lot of material.

What you are saying is that if your plan for various other plants was adopted, all you would need now is really 240 MGD capacity at Blue Plains? This does not mean that in the future, or now if you wish, you couldn't really have more at Blue Plains treated to a high degree safely? Is that what we are saying?

MR. BACON: Yes. And the figure there is 297 MGD for the year 2000. That is the best estimate we had.

MR. STEIN: All right. I think that --

MR. McKEWEN: That does not clarify it for me completely, because it still leaves a question.

Based on the table, I agree that 240 MGD would be adequate, but the table is based upon removing some of the flow now discharged to the plant as well as additional flow that has been planned to go through the plant.

MR. BACON: Yes, sir. That is envisioning reserving a capacity of 67 total MGD for the Maryland flow.

MR. McKEWEN: So the table arrives at the conclusion that 240 MGD would be adequate capacity, but based only on the premise that you remove some of the existing sewage flow --

MR. BACON: Yes, sir.

MR. McKEWEN: -- and planned additional flow --

MR. BACON: That is correct.

MR. McKEWEN: -- which would still leave the question really that Mr. Coulter raised as to why 240 MGD was selected as -- if I can use the word -- the "optimum" size for the plant.

MR. BACON: It was selected simply because that was the figure we had been working with as the plant capacity. It would be expanded to the extent to take care of the excess stormflows treatment in the primary system, bringing the secondaries up to 90 percent removal. As I understand the operation it is 70 percent or less now.

It was simply to bring the plant up to what you have there at the present time, but upgrading everything to the same level of 240 MGD.

To use an expression, it was the "design criteria" we accepted and used. We could have said 250 MGD possibly. Then we would have been talking about something like 1990. We could have used 230 MGD, and we would have been talking about a lesser design period than 17 years.

It was simply as you do in engineering. You set design criteria. And that is the one we set -- with some logic we felt.

MR. STEIN: Well, the proposal Mr. Blaisdell introduced is that this plan could be and should be considered, but, if they do not take this, the conferees should come up with an alternative within a month. As I understand it, within limits, the 240 MGD figure is a little flexible; it is not just absolutely firm.

Is that my understanding? Must we stay with that 240 MGD? Or do we have flexibility?

MR. BACON: Sir, I think you have flexibility on practically every point that is being made here. These are judgment factors. These are judgment factors based upon engineering and based upon experience.

Some engineer might say 235 MGD, and some might want 260 MGD, and again it depends upon how you are using those figures.

You really are not designing a plant for 240 MGD. If that is the average daily flow over the year, you are designing it for 1½ to 2 times that. That is the real capacity. But you relate this either to the average daily flow or the average maximum month.

You start out with a design assumption. This is not the total capacity of that plant at 240 MGD.

MR. STEIN: Right. I think this may at least clear away a lot of that possible confusion or concern.

As I understand it, Mr. Bacon, you have come up with a concept of having a diversification of the points of treatment. You have used a logical assumption in your opinion of design flows and have come up with these figures. However, it is possible to use that same concept if the District or Maryland or someone else wishes to come up with about the same thing, but the figures might be just slightly different -- say within the ball park --

MR. BACON: Oh, yes.

MR. STEIN: -- if they used a little different assumption.

MR. BACON: You are correct, sir.

MR. STEIN: Thank you. Okay.

MR. COULTER: Professor Bacon, several times during your remarks and throughout the report, there seems to be the inference that you are laboring under the impression that the Blue Plains plant is one large establishment, to handle all of the sewage from the Washington metropolitan area; and you have advised us that we should consider a network of regional plants.

Now, as a matter of fact, certainly on the Maryland side of the Potomac River, the Washington metropolitan area is developing with the concept of a number of regional plants. On the map behind you there is the Blue Plains sewage treatment plant, which is one of the regional facilities. There is the Piscataway sewage treatment plant, which, if you had been here yesterday, you would know is highly controversial but which has been considered, at least in the initial planning, for going to a capacity of 100 to 150 MGD.

Not shown on the map are plants in being or scheduled to serve the growing metropolitan area, which drain into the Potomac River below the enforcement area or into the Patuxent drainage area to our north and to the east.

These plants are; the parkway sewage treatment plant, the Horse Bend sewage treatment plant that is under construction now, the Western Branch sewage treatment plant, as well as the sewage treatment plants at Bowie, Bel Air, and a number of smaller installations that eventually will be taken out of service.

The concept of regional development of sewage treatment plants is well established in the State of Maryland, and I think we are well along the way for coming up both with the planning mechanism and the regulatory mechanism, as well as the implementing mechanism to make regionalization work.

So the question is: Why Blue Plains? And why is it part of the regional facility for Maryland?

In drawing up this report, did you go back and look at the public policy developed by Congress, developed jointly with Virginia and Maryland and the District, that resulted in that network of pipes and the Dulles interceptor sewer to bring sewage to Blue Plains, as opposed to what you now say would be a more logical concept of small sewage treatment plants above the District's water supply and perhaps draining down through the District waterways, such as Rock Creek?

Did you look into the public policy that directed and dictated the investment in sewers and sewage treatment work that has resulted in a regional facility at Blue Plains?

MR. BACON: Yes, I did. In fact, we had a number of summaries prepared. We had documents.

I am aware of your "no effluent" policy on I would call it the Upper Potomac River. And we had other documents. And we had some legal opinions prepared about these documents.

I looked into them. Yes, sir.

I will have to say that the search was quite laborious on the part of the Federal people, because these things, some of them, seemed to be rather hard to locate. They are historical documents. I notice some of them come quite far out of the past.

But I believe that they made the search and presented to me the sense of the development of this area. Yes, sir.

MR. COULTER: Then, you did go through that and look at the Congressional Record which was behind the authorization of the Dulles interceptor sewer?

MR. BACON: No, sir. I looked at the results of the Congressional Record. I mean the summary reports, and so forth.

MR. COULTER: And the Congressional Record and report on the legislation as late as 1965, which clearly establishes the policy and use of the Dulles interceptor sewer to forestall the development of small sewage treatment plants, or regional sewage treatment plants above the District of Columbia on the Potomac?

MR. BACON: I am aware of that, yes.

MR. COULTER: So that your recommendation is actually one that is contrary to the will of Congress, as well as the policy that now exists in the States, and in the plan of implementation adopted by Interior?

MR. BACON: Absolutely not. You have a choice on this matter, as far as I see it, where you want to drain your 67 MGD from. If you attempted to drain it out of the Potomac system, the Dulles area, I am sure you would have some problems for the time being.

Where the 67 MGD that we computed was your established right in that system comes from would be up to you -- Rock Creek or Anacostia or any other area.

I think that it is clear for the Dulles interceptor what they intended.

I know it was also in this "no effluent" policy decision that there have been second thoughts taken by the municipalities and I believe the States on that question.

Because I have read the documents subsequent to-- Oh, I forget how many years ago it was when the "no effluent" policy, so-called, was established. And I believe the logic was that the State could not prohibit the development in that upper area if the discharger met requirements.

This is a matter for you people, though, and I think that was the position that you took. I don't know which State it was or whether it was both States.

I am aware of this development. I will have to add now that just because we did something one way 5 or 10 or 20 years ago might be one of the big mistakes we are making.

MR. JOHNSON: Mr. Chairman, this matter of the "no effluent" policy has been raised several times yesterday and today. I have had 2 copies of this policy statement provided me this morning, and I would like to have it introduced for the record.

MR. STEIN: Without objection, it will be done.

(The policy statement follows:)

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

HEALTH AND ENVIRONMENTAL PROTECTION POLICY COMMITTEE

RESOLUTION APPROVING "REQUIREMENTS REGARDING WASTE DISCHARGES INTO THE POTOMAC RIVER WATERSHED FROM THE MONOCACY RIVER TO LITTLE FALLS" AS REVISED MAY 28, 1969.

WHEREAS, the Regional Sanitary Advisory Board at its February 1969 meeting had occasion to consider the Requirements Regarding Waste Discharges Into the Potomac River Watershed from the Monocacy River to Little Falls and as a result of the ensuing discussion directed its Wastewater Committee to review the current policy in the light of changes since its adoption in 1961, and,

WHEREAS, conditions have changed considerably and Water Quality Standards have been adopted by Maryland, Virginia, and the District of Columbia and approved by the Secretary of the Interior, and,

WHEREAS, the Regional Sanitary Advisory Board has found that present policy is outdated and is in need of revision, and,

WHEREAS, the Regional Sanitary Advisory Board has prepared revised Requirements Regarding Waste Discharges Into the Potomac River Watershed from the Monocacy River to Little Falls, and has recommended that the Council of Governments adopt these "Requirements" as a basis of policy and urge its constituent members and the States of Maryland and Virginia to utilize these "Requirements" as a guideline, and,

WHEREAS, the Health and Environmental Protection Policy Committee has reviewed the report and the recommendations of the Regional Sanitary Advisory Board and concurs therein,

NOW THEREFORE BE IT RESOLVED that the Health and Environmental Protection Policy Committee accepts the Report titled "Requirements Regarding Waste Discharges Into the Potomac River Watershed from the Monocacy River to Little Falls," as revised May 28, 1969 and recommends that the Council of Governments adopt these "Requirements" as a basis of policy and urge its constituent members and the States of Maryland and Virginia to utilize these "Requirements" as a guideline.

Adopted 10/30/69

* * *

REGIONAL SANITARY ADVISORY BOARD
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

RESOLUTION RE: "REQUIREMENTS REGARDING WASTE DISCHARGES INTO THE POTOMAC RIVER WATERSHED FROM THE MONOCACY RIVER TO LITTLE FALLS

ADOPTED 10/13/69

WHEREAS, the Regional Sanitary Advisory Board at its February 1969 meeting had occasion to consider the requirements regarding waste discharges into the Potomac River watershed and as a result of the ensuing discussion directed its Wastewater Committee to review the current policy in the light of changes since its adoption in 1961, and

WHEREAS, conditions have changed considerably and Water Quality Standards have been adopted by Maryland, Virginia and the District of Columbia and approved by the Secretary of the Interior, and

WHEREAS, the present policy is outdated and is in need of revision.

NOW, THEREFORE, BE IT RESOLVED that: The Regional Sanitary Advisory Board accepts the Report titled "Requirements Regarding Waste Discharges Into the Potomac River Watershed from the Monocacy River to Little Falls revised, May 28, 1969," and recommends that the Council of Governments adopt these "REQUIREMENTS" as a basis of policy and urge its constituent members and the States of Maryland and Virginia to utilize these "REQUIREMENTS" as a guideline.

AGENDA ITEM NO. V

REGIONAL SANITARY ADVISORY BOARD

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

REQUIREMENTS REGARDING WASTE DISCHARGES INTO THE POTOMAC RIVER WATERSHED FROM THE MONOCACY RIVER TO LITTLE FALLS

Revised May 28, 1969

Background

The water supply for the District of Columbia and much of the surrounding metropolitan area is obtained from the Potomac River. From its confluence with the Monocacy River to the water supply intake at Little Falls generally is regarded as the stretch of the river that must be protected primarily for this purpose. Many persons in the Washington metropolitan area have been and continue to be concerned that continuing pressures for development will inevitably cause deterioration in quality which will adversely affect the continued use of the Potomac River as the area's principal source of water supply. This concern led to the generally-accepted conclusion that there should not be any treated or untreated sewage effluent discharged into this stretch of the river and its tributaries.

While it is now technically possible to purify sewage and produce water that will not be an added hazard to the metropolitan water supply, the aforementioned conclusion prompted Congress in 1960 to authorize the construction of a 30-mile interceptor sewer from the District of Columbia to Dulles International Airport (the Potomac Interceptor). The purpose of the interceptor primarily was to prevent any discharge of treated sewage from the airport into the Potomac or its tributaries, and secondarily also to intercept existing and future sewage discharges from areas in Maryland and Virginia adjacent to the river and logically tributary to the interceptor.

In 1961 representatives from the Maryland State Department of Health, the Maryland State Department of Water Resources, the Virginia State Department of Health, and the Virginia State Water Control Board adopted "Requirements Regarding Waste Discharges into the Potomac River Watershed from Monocacy River to Little Falls." These Requirements were concurred in by the Metropolitan Washington Council of Governments Regional Sanitary Advisory Board.

These Requirements were adopted with the recognition that (1) the area tributary to the interceptor roughly coincides with that portion of the Potomac River Watershed of concern, (2) many miles of tributary sewers would need to be built for the interceptor actually to serve this area, and (3) the pollution control laws of Maryland and Virginia do not authorize the Maryland State Department of Water Resources and the Virginia State Water Control Board to deny to owners permits to discharge treated wastes to streams in this area on the sole premise that their wastes should most logically be put into the interceptor.

At its February 1969 meeting the Regional Advisory Sanitary Board had occasion to consider the Requirements and, as a result of the ensuing discussion, the Board directed its Wastewater Committee to determine if the Requirements are adequate and satisfactory in the light of present conditions. The Wastewater Committee met April 14, 1969 and decided that some revision of the Requirements was in order. Following are its findings and recommendations adopted at a meeting on May 28, 1969.

Findings

1. The problem of disposing of sewage and other wastes generated as a result of development in this area of the Potomac River watershed through the interceptor is primarily one of accessability to the interceptor. The problems fall into roughly three categories.

a. Installations that are near to and which can conveniently connect to the interceptor.

b. Installations that are moderately remote from the interceptor, but which connect to it in the relatively near future, when feeder lines can be constructed or made available by others.

c. Installations which are so remotely located in time or distance that their connection to the interceptor cannot be made until the distant future.

2. Ordinarily, installations in category 1a. will cause no problem, in that they may proceed with the anticipation of an immediate connection to the interceptor. However, if development in the area is not to be totally stopped, installations in categories 1b. and 1c. obviously must discharge their treated wastes in the Potomac or its tributaries until eventually an interceptor connection can be made. The final decision with respect to whether or not such a discharge will be permitted is the prerogative of the appropriate State agency having jurisdiction over stream pollution control.

Recommend Requirements

1. The water quality standards duly established by the State of Maryland, the Commonwealth of Virginia, and the District of Columbia and enforceable by these jurisdictions shall be the basis of these requirements. The applicable standards are set forth in the following publications:

> State of Maryland, Water Quality Criteria and Standards.
>
> Commonwealth of Virginia, Publication WQ44, "Standards of Water Quality for the Tributaries of the Potomac River Basin in Virginia."
>
> District of Columbia, "General Water Quality Criteria and Specific Water Quality Standards for all

Interstate Waters in the District of Columbia."

2. Since maintaining the quality of the Potomac River for the protection of the Washington metropolitan area public water supply is of paramount importance, emphasis shall be given to the incorporation of safety features in sewage and other waste treatment facilities so they will, without interruption, maintain established standards of stream quality. Whereas treatment facilities can be designed to meet water quality standards, experience has demonstrated that reliability of facilities, and maintenance and operation leave much to be desired. Examples of safety features are dual or standby power sources, dual chlorinators, fail-safe alarm systems, holding and/or overflow ponds at pumping stations and treatment plants.

3. Owners of sewage and other waste treatment facilities shall be responsible for maintaining and operating such treatment facilities so duly established standards of water quality are uninterruptedly maintained in the receiving stream. Personnel for 24-hour operation may be required. Such owners shall make such analyses as are necessary of effluent and stream samples, make such observations, and keep such records as are necessary to the operation of treatment plants and other facilities as will satisfy the regulatory agency or agencies having jurisdiction that standards of quality in the receiving streams are uninterruptedly being maintained.

4. Any owner proposing to construct sewage or other waste treatment facilities shall satisfy the appropriate regulatory agency or agencies, as a condition to approval of the proposed treatment facilities and the issuance of a permit to discharge into the receiving stream, that such owner can satisfy the requirements of item 3.

5. To the extent that they are legally empowered to do so, the regulatory agency or agencies having jurisdiction should require that sewage and other waste treatment facilities be maintained and operated by the local political subdivision in which the facilities are, or will be located. "Local political subdivision" shall include, in addition to counties, cities and towns, authorities, sanitary districts, and other similar public bodies.

* * *

MR. STEIN: Let me add something here because I possibly have had as much to do with the development of that policy, the working of it, and approval of the Dulles interceptor as anybody.

I think Mr. Coulter is absolutely correct, and I think Mr. Bacon is correct, too. But here is the situation:

When we were faced with the problem in the 1950's, we were thinking in terms of an 80 percent removal of BOD.

We were also thinking of eventually coming up to a 90 percent removal of BOD. We did not think that water of that quality would enhance the Potomac, where the Monacacy comes into the Potomac a little below Leesburg down to Great Falls.

As you know, that is the area where the District gets its water supply. So we decided to try to hold the line, if we could, on a "no effluent" policy upstream.

However, within just the past few years we have come up with this concept of advanced waste treatment of 96 to 98 percent removals and the notion that we could produce water almost like drinking water.

You heard the colloquy in which Mr. Bacon indicated he would recommend this water being possibly used for all uses except putting it in the tap. Maybe he has his reasons for that. They might be esthetic. But in some places they are using that all the way around.

I think Mr. Coulter pointed this out when he talked about the amount of water which could be treated in a particular place. If we are talking in terms of renewing our resource, not just using it once and letting it go to sea but recognizing this water as a resource, refurbishing and renewing it; if by doing this we get water of this high quality then it becomes a question whether it is wise to build miles of pipe to get these in one place, or whether a regional plant would not call for shorter pipes and work the regional system that way.

I don't think there is any doubt about what Mr. Bacon is proposing. His plan calls for a reversal of this policy of piping all this stuff to Blue Plains. In order to expedite that policy, we have gotten congressional authorizations for interceptor sewers, etc.

In light of the concepts that Mr. Bacon has put forth, the conferees have to decide whether we are going to go along with that or seek some kind of modification to it.

MR. COULTER: I would certainly agree that there is a possibility in the future for all kinds of better use of the facilities which have been financed and are under way now. But, Mr. Bacon, I am not talking about the "no effluent" policy adopted by the Washington Metropolitan Council of Government. I am actually referring to a document that is here in front of me. I believe it is the latest deliberation in Congress on this, dated August 25, 1967.

In this, Congress, with the support of the Bureau of the Budget and all of the Federal agencies involved, increased the Federal contribution to the Dulles interceptor sewer, and the primary purpose was to forestall communities from building sewage treatment plants in lieu of using the Dulles interceptor sewer.

With the more favorable grant provision which had come into being since the construction of Dulles interceptor sewer, there was a temptation both on the Virginia and Maryland side to use the grants that were available for building sewage treatment plants to build plants and not use the Dulles interceptor sewer.

In this report, as late as 1967, Congress again reaffirmed that it was its objective to not have sewage treatment plants up there but to use the Dulles interceptor sewer.

I will agree with you that this is something we can go back to Congress and talk about. Certainly with the bare skeleton outlines behind it here, there may be some logic to putting a sewage treatment plant at about the location where the two pipelines joined in a connection across the Potomac River. That would have the effect, if I understand it, of relieving something like 360 square miles of the area that is now drained to the Blue Plains plant.

But, Professor, I submit to you that that is nothing that could be worked out in 30 days or 60 days or incorporated into the ongoing plan of compliance in the Washington metropolitan area.

MR. BACON: For clarification, might I ask a question of you, Mr. Coulter?

MR. COULTER: Certainly.

MR. BACON: Does that apply other than to the Potomac and the Dulles interceptor? Does this Federal report address itself to other than the Dulles interceptor? It doesn't say anything about Anacostia or the other drainage areas, does it?

MR. COULTER: I am sorry, Professor Bacon. I do not mean to spring things on you that you do not know about?

MR. BACON: I am rather familiar with that. Does it address itself to anything other than the area tributary to the Dulles interceptor?

MR. COULTER: It addresses itself to the very special conditions of the Potomac River in the Washington metropolitan area and its relationship to our Nation's capital and the influence that Congress has always had on the development of facilities in this area.

I raise it only because I want to point out that no matter how knowledgeable we might be of practices in other parts of the country, the Washington metropolitan area itself is a unique situation, and these public policies have to be wrapped into our recommendations and our thoughts with respect to sewers and sewage treatment as well as anything else.

MR. BACON: The recognition of the point that you are making is why I said nothing about the Dulles interceptor area. I did not make any recommendations on that point, recognizing this was a policy matter --

MR. STEIN: Mr. Blaisdell.

MR. BACON: -- that we included the flow of that interceptor in the Blue Plains capacity consideration.

MR. BLAISDELL: I think you have just said what I was going to say -- that within this proposal are the designed entitlements for both Virginia and Maryland in the Potomac River interceptor.

MR. STEIN: You mean Dulles?

MR. BLAISDELL: Call it Dulles.

MR. BACON: Yes. That is right.

MR. McKEWEN: Could I raise a question at this point, Professor Bacon, on the matter of entitlement, which has been used a couple of times.

In your report you have indicated that by taking the capital investment of Maryland jurisdictions in the Blue Plains plant as compared to the total investment in that plant, and multiplying that ratio times the 240 MGD limit upon which the report is premised, you would arrive at a 45.5 MGD entitlement or allocation to the Maryland jurisdictions.

MR. BACON: Yes.

MR. McKEWEN: In view of the fact that the Blue Plains plant is part of an existing regional system which consists not only of the treatment facilities but also the pumping station, et cetera, leading to the plant, was any consideration given to what effect that limitation would have upon existing structures which have been financed jointly by the District of Columbia and Maryland jurisdictions?

MR. BACON: Yes, there was considerable discussion and work done on that question of the values and capacities and who paid for the various interceptors.

This formula itself is subject certainly to refinement. This is the best we could do in getting the figures as to what WSSC had invested in Blue Plains and what the total is.

Certainly your figures might vary as much as plus or minus 10 percent. But this is the ball park. And this was simply to try to establish the concept.

These are not that sacred. I am not saying that 45 is right, but it will be of that order of magnitude on the basis of what I had available to me and what the staff of the FWQA had available to it.

I do think in all fairness -- and this is something I did not address myself to -- there certainly would have to be a consideration, which has been done throughout the country, that if somebody invested money and then, you might say, lost a portion of that investment because of a change in plan, in equity there would have to be some kind of a settlement and payment.

This has been done often when plants regionalized, when they coalesced. There is no reason why this system could not work if there is a decentralization, you might say, but still a regional plan.

MR. STEIN: Maryland is familiar with that. That is the essence of that Maryland State proposal.

MR. BACON: Let me just tell the conferees something here, and maybe it will clarify a little bit.

I was not asked -- and I would not have accepted the assignment -- to make a detailed engineering financial study. I was asked to come in and look at the conceptual approaches and use judgment based upon other areas and this area as to what I thought would be desirable.

So, you see, except to the extent of getting ball park-- That is really all I needed for that kind of assignment. And I think that assignment has been fulfilled, whether you agree with it or not.

So when you asked me about 57,000 lbs. of BOD and whether it is carbonaceous or nitrogenous, that comes from somebody else.

But the concepts here I am certain -- of saving a site, not having to enlarge, decentralization, considering the product now a resource -- are sound I believe and they should be applied to this area.

In fact, to do otherwise-- And there is another thing I think should be taken into consideration here. No one is kidding himself that this is not somewhat of a standoff on costs, although I have said in my opinion that it will cost less total in the long run.

Certainly if so much treatment plant is having to be built -- and certainly if, as I said and as others have said, the unit costs become practically the same when you get to 50 MGD or 100 MGD and exceed it -- it is going to be built somewhere and paid for by someone, so the costs are going to be somewhat a standoff too. That we recognize.

I think they will be less, because building a plant from the ground up for 100 MGD capacity certainly is going to be less expensive. I have been in the design business, and I have done this where you have had to add to a plant, and so forth. The difficulties do make the project more costly.

Again, it would depend upon foundation conditions, whether in so other place these foundation conditions are not as favorable as Blue Plains. This could have a great deal to do with the costs. I did not go into that.

But I wanted to say to this group and to the conferees that I am not pretending that this is a great economy to the total area. It is a shifting. I think that should be evident.

MR. STEIN: Mr. Coulter.

MR. COULTER: Well, I am glad you gave it that explanation, because I didn't think anyone would compute the equal equities involved in a regional facility on the basis of the calculation that was given in this report.

Certainly in your consideration of the savings in decentralization you would have to go back and look at the investments that are already in place in pipelines leading to the site that is under discussion.

I agree with you that there might be -- could conceivably be -- some marginal use of that excess capacity as storage. But certainly there would not be the payoff of using it for the purpose for which it was intended and constructed and financed -- and that is to convey this sewage to that regional site.

I just have one other question. I understand that we have to break for lunch. But you state that it is a logical solution to remove much of the load from suburban Maryland, requiring that area to provide waste treatment plant capacity over and above its capacity rights at the Blue Plains plant.

The capacity rights, as I understand them, were just calculated from that formula that took 5.5 over 29 and multiplied by 240, which we both agree is no way to go about establishing capacity rates.

MR. BLAISDELL: Do you have a better figure, Jim?

MR. COULTER: Of course.

MR. BLAISDELL: We would like to hear it.

MR. COULTER: I think that had the Federal Water Quality Administration and their consultant approached the owners of these facilities, the District of Columbia and Washington Suburban Sanitary Commission, they would have been glad to give them more factual information about what the equities are.

MR. BLAISDELL: This is just how it was obtained.

MR. COULTER: I do resent this kind of abuse of a consultant -- a consultant coming in to an Assistant Secretary, working with the experts in the Federal Water Quality Administration, and then simply presenting us a report of this nature without once working with or consulting with the owners and the responsible agencies.

The answer to your question is -- again I reiterate -- "of course."

MR. STEIN: I will tell you what we are going to do. We will recess for lunch, and I hope that will improve the dispositions. (Laughter)

We will be recessed until 1:30. But I would also like the conferees to think at lunch about how we can be most productive for the rest of the day we have here and see how we can move this along and come to a resolution.

With that, --

MR. FREESE: Mr. Chairman, before you lower the gavel there, I had one point, if I may, to be thinking about during lunch, if I could ask Professor Bacon one more question.

As I understood what he said, and I think I appreciated it, this in general was a subjective evaluation of the situation. I think I understood him to indicate that.

MR. BACON: Yes.

MR. FREESE: Would it be asking too much to ask you if, in your professional judgment, the recommendations that you have presented to us here will result in a more economical solution to the problem and provide improved water quality in the Upper Potomac Estuary than the plan of implementation that we have proposed and that has been approved by the Federal Government?

MR. STEIN: All right. We will recess for lunch.

(Whereupon, at 12:03 p.m., the luncheon recess was taken.)

AFTERNOON SESSION

1:40 p.m.

MR. STEIN: Let's reconvene.

Yesterday we heard from Julian Holmes on the Piscataway. When I first met Julian Holmes, he was accusing the Maryland officials of malfeasance and misfeasance in office, which was not sustained.

Yesterday he picked on-- I guess he switched to Gene Jensen. And then when I indicated to him that I thought Gene Jensen was an honest man, I understand today he has called the Commissioner and complained about me. (Laughter)

MR. McKEWEN: Welcome. (Laughter)

MR. COULTER: It was an exclusive club. (Laughter)

MR. STEIN: I didn't know you opened the membership. (Laughter)

Are there any other comments or questions? Or do we want to go on?

Mr. Hope, did you have anything to say?

MR. HOPE: I have been sitting here, Mr. Chairman, listening very attentively this morning, and I think the time has come for us to go back and look objectively at where we stand.

You may note from time to time a little pique or bias that moves into some of my comments. Because while I have been drawn away from this conference --

MR. STEIN: Malcolm, --

MR. HOPE: -- on two occasions --

MR. STEIN: Do you want to stop?

MR. HOPE: -- on two occasions --

MR. STEIN: I don't want to let that "pique" go, because I knew you when you were young, before you had that widow's peak. (Laughter)

MR. HOPE: In some respects I felt there was a little element of redundancy in this particular conference which we have experienced on prior occasions. I find it is a little awkward, a little embarrassing, to find that certain decisions, certain statements are being made which affect many of us directly, and we have had no opportunity to discuss with the principals involved some points of view that should have been considered before such statements were being made.

Where are we? We are trying to clean up the Potomac River. And while I have deep admiration for my friends in the Federal Water Quality Administration, I think there are other experts in the world and in the Nation whose views probably carry equal weight on how we may attain such goals.

I would remind you that the goals have already been established, and these were through the promulgation of water quality criteria, not as a unilateral activity, but by the several jurisdictions in concert with the Department of the

Interior.

Let me give you a little simple analogy. I'm going to be back at my office this afternoon, and I am going to ride a cab. I don't know whether it is going to be a Ford, Chevrolet, or a Plymouth. But I am going to get there.

And I don't think I care what kind of a car it is, just so I get to 1875 Connecticut Avenue before the office closes.

In this respect, I point out that I don't think Interior should be concerned how we achieve these standards. These are our dollars that are being spent. We are the people that are going to have to go out to find the dollars to pay for the plants they are talking about. And we are the ones who will stand before the public in the event those plants don't achieve the goals which we hope they will.

So point No. 1 is that we have established water quality criteria, State and Federal, and they are binding.

I would remind you also that we submitted -- the conferees submitted -- a plan whereby we could attain these particular standards or criteria of water quality. And we are just as deeply concerned with cleaning up the Potomac as you are. We submitted them a year ago and they were approved.

I admit to the fact that Interior has employed a well-recognized, very capable and very competent consultant to take a look at the situation, and he has come up with an alternate proposal, which is perfectly all right. But I do not think this includes the prerogative on the part of Interior to tell us that this is the only solution until such time as Interior has sat down and reviewed in good conscience and in detail and with the principals involved the shortcomings of the plan proposed.

I would accord to you the privilege of going out and hiring any consultant that you want in this country, letting him make the same type of subjective evaluation of the plan that we have already submitted, and then, for heaven's sake, sit down with us and discuss our respective points of view.

We can do this better through the mechanism of an executive conference than we can in this type of a meeting.

I would like to move at this point in time, Mr. Chairman -- because I do not feel that any further purpose will be served by a continuing dialogue of the type that we have had this morning -- that the conferees reaffirm their position of support for the plan that was previously submitted and approved some 12 months ago within the time schedule as already established, with the full understanding that if we fail there are legal mechanisms available to Interior whereby you can bring pressures to bear if the need should arise.

I would also include in that motion

the suggestion possibly that if you would like to employ outside consultants for the review of our plan, to identify any possible shortcomings, we would not offer any serious objections to that.

But until such time as we are convinced that we are wrong, it is my feeling at least -- and I hope most of the conferees concur with me -- that what we have proposed is reasonable, it is practical, and it will result hopefully in a cost-benefit realization to the public,whom we represent, and whom Interior represents,better than some of the alternate proposals that we have been hearing about.

And I would so move.

MR. STEIN: Thank you, Mr. Hope.

You know, sometimes I feellike I have been born a century too early. But I think, Malcolm, you were born 20 years too late. With a voice like yours, 20 years earlier you could have been one of our superb news commentators.

MR. HOPE: Why do you think it's too late? (Laughter)

MR. STEIN: I am just spurring you on. (Laughter)

Let's hear from the conferees on that.

MR. McKEWEN: Could I ask Mr. Hope if he was making a motion? Were you, Malcolm?

MR. HOPE: I admit to the charge that it was rather lengthy. My motion would be, in simple terms, that we reaffirm the plan that was adopted by the conferees at the enforcement conference of last April-May 1969 and that we proceed as quickly as possible to carry out the necessary steps in order to carry out those agreements.

MR. McKEWEN: I will second that motion.

MR. STEIN: Are there any other comments?

Mr. Blaisdell.

MR. BLAISDELL: I do not think that the Department of the Interior could agree to this. We have tried to show you in the last day and a half here that we believe the levels of treatment that were set by the third conference are not adequate, and this is borne out I think by the reference to Dr. Jaworski's study here in this table on page IV-21, where it is 1970 now and already from his findings we need these percentages of levels that were previously adopted. We are not too far from 1980.

And certainly if a 309 MGD plant is going to be designed, then, according to Dr. Jaworski's findings, these levels have got to be raised -- and even more so when we go to a design for the year 2000.

So it is my feeling, because of this, because of this feeling in the Department of the Interior, we have come up with a proposal.

I tried to make myself clear this morning by saying that we were not trying to pressure anybody into accepting this proposal, but we were trying to point out that what we had previously agreed upon apparently will not do the job. So further consideration must be given to it.

The proposal that Interior has submitted through Professor Bacon is what we feel will work. If the rest of the conferees will not agree, then certainly they should come up with their own proposal.

But the Department of the Interior again believes that we have got to move forward. So, therefore, they are requesting that at least if you do not agree with this you come up with some sort of an agreement between yourselves within 30 days of what will be done, and then within 60 days some sort of an implementation plan for it.

MR. McKEWEN: Frank, it seems to me that we are getting several different issues all wrapped up into one set of issues, and the situation is really not that simple.

On the one hand, you are saying that the technical analyses that have been made over the past few months indicate the percentage reduction of pollutants that were previously prescribed by the conferees will in your judgment no longer be adequate. And presumably some of the technical reports that will be submitted later in this conference address themselves to that issue.

But separate from that is a particular plan designed to incorporate those higher pollutant removals, but also incorporating a particular way to arrive at waste management.

Malcolm Hope can correct me if I am wrong. I believe what he was addressing himself to was not whether BOD should be 96 or 98 percent, whether it should be 15,000 or 12,500 lbs. He was not discussing that kind of technical detail. He was talking about a manner in which to achieve water quality standards.

Malcolm, if I am wrong, correct me. I do not believe that your motion was designed to preclude any adjustment of technical detail.

MR. HOPE: No, sir, it was not.

Let me make a point to Mr. Blaisdell, if I might, and not in a negative way either. I do not know that I have seen a document which contains the detail of Interior's reservations as they relate to the plan that was approved about a year ago and where you were a party to its approval, or Interior was.

If you have these kind of reservations, I think we are entitled to a specific documentation. And again, in some respects, let us work out the alternative proposal -- if we need help we will holler -- as to how we can meet your reservations and still attain these quality criteria for the waters of the Potomac. They are not only our standards; they are your standards as well.

MR. STEIN: Mr. Freese, do you have a comment?

MR. FREESE: I would just like to speak in support of my colleague, Mr. Hope. I believe --

MR. STEIN: I am glad to see the District is together.

MR. FREESE: Thank you.

I am quite frustrated, as usual, by the Federal attitude that we have not presented a plan. It is my understanding that our plan has been presented and accepted, and I believe we should proceed with it.

MR. STEIN: Mr. Johnson.

MR. JOHNSON: I think that I would agree to a large extent with what Mr. Hope has said.

At the same time, I do have some problems with this. I think that I would like to reiterate what Mr. Hope said on a little different basis.

I think that the facts of the matter are that the public here in the metropolitan area, the citizens, are expecting this river to be cleaned up. They are not concerned too much with how this be done. I think they are presuming they can leave this up to the agencies that have this responsibility, because they do have the expertise.

And now, apparently, Interior has taken the position recently that the allocations that were made a year ago are not going to be sufficient to clean up the river, as we had anticipated at that time, and that one of the ways in which we might better accomplish this, or might accomplish it, is to go to this evaluation that Professor Bacon has made.

I raise a question in my own mind. This is the permissible loading that was arrived at last year in this 20-mile zone. I have not heard any reference, if you separate the Maryland suburban waste and treat it somewhere else, to where the effluents go so that they will not be still upon the District loading.

If there is an answer to that, I would like to have it, because I have not seen it yet.

MR. STEIN: Let me answer your question. I am not sure it is going to be the question of total loading. I want to put this out here. The question I really have is: Do you technical people believe that we should not spread that loading around the estuary, that you would rather have it in one place? I know Mr. Coulter has been pushing for this for years.

I think we have two questions of control, two problems of control. One, what degree of treatment are we going to provide at each point? Secondly, at what point in the estuary are we going to put this waste loading after the treatment?

I think it has been stated -- and this may be an overstatement -- if we use a sophisticated and adroit series of discharge points, it may be worth 10 lbs. of BOD to put it in one place rather than to put it in another. Does this sound unreasonable?

MR. JOHNSON: No, I do not think that is unreasonable, if that is the case.

But I get a little concerned, Murray, about the fact that a year ago we arrived at a set of agreements, and now we are saying that these agreements were not proper.

MR. STEIN: Who is saying that?

MR. JOHNSON: This is the impression I get.

MR. STEIN: If the conferees were saying it, we can get agreement and adjourn.

MR. JOHNSON: I get this impression from the material that FWPCA and FWQA have presented.

I am not arguing the merits of this. The thing that concerns me is that we do not come up a year from now and say, "Whoops, this wasn't right either. We have got to go in a different direction."

I think we have been doing this for the past year, and I think this is one of the reasons that the District of Columbia has stayed frustrated in knowing what it is that they are expected to do. And I think what we would like and what I would like is to get this thing settled so they can get on with the job.

MR. STEIN: Well, I will tell you one thing I would recommend the District of Columbia not do, and that is ask for those 50 acres.

MR. HOPE: Ask for what?

MR. STEIN: Ask for the 50 acres. Because if they keep on doing that-- And it is the same. I think Maryland arrived at that with the Piscataway. Don't ask for the 50 acres. And the answer is no. Maryland had asked for that pipeline across the parkland. The answer was no, and they faced reality.

I think the sooner the District faces reality, the sooner we can get on with the job.

MR. JOHNSON: Well, --

MR. HOPE: May I, Carl? This is a little bit facetious. As a health officer, if I could eliminate 50 acres of mosquito-breeding land in the Washington metropolitan area, I would be tickled to do it.

I have always wondered about the reason for the answer "no" on the extension of the outfall from Piscataway -- it is none of my business, because I am in the District -- across a piece of Federal property so that those wastes can be put into the main stem of the Potomac rather than festering and causing problems in the embayment.

That was simply to indicate I am still confused.

MR. STEIN: I did not know that you were confused, Mr. Hope. The answer is "no" as far as I can see officially on both counts.

As far as I can see, Maryland has faced up to reality and is moving forward in Piscataway.

MR. McKEWEN: Murray, reality has many different faces, and I do not know which one ultimately is going to prevail. But I think perhaps a lot of this discussion could be brought into better focus if we bring up one concern, which is that the plan presented this morning has as one of its stated virtues the ability to enhance water quality in the Potomac more rapidly than the present plans would provide. This is open to serious question.

MR. STEIN: Let me do this. I hate to break in here. Mr. Freese asked the question before we left for lunch, and this was about the question you are asking. Do you want to answer that question, Mr. Bacon?

MR. BACON: If he wants it answered. But I think you are in a discussion here as to whether --

MR. STEIN: No, no, but the question here -- and Mr. Freese had an appropriate question -- is whether this would be more economical, what you are proposing, and really protect the Potomac River better than anything. I think we should get an answer to that, because this is the question that you have brought up now.

MR. McKEWEN: It is part of it.

MR. STEIN: Right. We will let you go on.

MR. BACON: I will tell you why I think I said it would be less costly. Starting a plant from the foundation up will usually be, per million gallons per day of capacity, cheaper than if you are trying to modify a relatively old plant, for the simple reason that in modification of an old plant you have to do it step by step.

You can only take so much of it out of operation at one time. You are having to add on to a facility. It is like adding on to a house that you have to use while you are making the changes. It is more cumbersome, and it is usually more costly.

Likewise, a new design starting from the foundation up can take advantage of modern technology that you cannot take advantage of in an older plant -- and I speak from experience here -- without very costly modifications in the sampling, instrumentation, and control processes.

I definitely feel if the Maryland load is carrying its proper and just and equitable financial load at Blue Plains that the financial load will be less for each million gallons in a new plant.

MR. STEIN: Thank you.

MR. BACON: The answer to the question is definitely I think there would be economy.

Now, I do not know the foundation conditions. But I call to your attention that this could be very key. I certainly know river bottoms are hard to construct in. And inland areas usually -- usually -- I do not know -- have better foundation conditions. But that could have a great deal to do with influencing the cost.

Does that answer the question, Mr. Stein?

MR. STEIN: Yes, it does, for me. I would hate to construct on the foundation of Mr. Hope's mosquitoes. (Laughter)

MR. BACON: Again, it is only as a suggestion -- but, again, a very serious one and one based upon a great amount of experience in this field -- that I make these recommendations. I made them, and I am sure that will receive serious consideration in the same vein that they were made.

It may be that you will come up with a different conclusion. This is not in criticism at all of anyone else's design. This is another alternative that might produce quicker results. And I say "quicker" because you will build a new plant faster than you will modify an old one per million gallons per day of capacity, without a doubt.

MR. STEIN: But don't we have the old one? This bugs me, Vint. Don't we have the old one, the plant at Blue Plains, and aren't we going to have to live with that for the foreseeable future?

MR. BACON: Of course. There was no suggestion, Mr. Stein, that that be dropped or eliminated. It seems that the combination of the two, the old and the modification of the new, would actually get you results quicker and cheaper and, furthermore, put that resource back in the area where it can be used.

I would reiterate that every chance I get -- that you are not talking about a waste now. You are talking about a valuable resource in that river.

MR. HADDER: Mr. Chairman, --

MR. STEIN: Yes?

MR. HADDER: -- could we get a comparison between the water quality goals to be achieved between the existing plan and the proposed plan? Are they both going to get us to the same place? Or is one better than the other in terms of the water quality goals we are trying to reach?

MR. STEIN: Do you or Mr. Blaisdell want to comment?

MR. BACON: Mr. Stein, do you need me here any longer? I will sit down if you don't.

MR. STEIN: Why don't you sit down.

MR. BLAISDELL: Well, I would say in answer to that question, from the studies that we have recently done, and again referring to this table that Dr. Jaworski mentioned this morning in a report that we have not presented yet which has been made evident I think by the rest of the conferees, the indication is that the level of treatment, regardless of whether it is going to be for a 240 MGD plant or some other figure, has got to be at a higher level than what the conferees establish.

Am I right in that statement, Dr. Jaworski?

DR. JAWORSKI: Can I explain a couple of quick things on this?

MR. STEIN: I know you can explain a couple of quick things. Are you going to explain them quickly? (Laughter)

DR. JAWORSKI: Okay. Let's get back to that table again. It is sort of a magic table.

First of all, we have not changed our loading requirements for zone 1 of the estuary. On the table on page IV-21, what is shown there is the allocation for the Blue Plains wastewater discharge for 3 different benchmarks.

If you have set a fixed load in terms of pounds per day of 12,700 for BOD, 6,130 for nitrogen, and 560 for phosphorus, as your wastewater loads increase, as your volumes of waste generated increase, to maintain the same level in the effluent the percent removal has to increase.

Okay? It is a simple matter there of just mathematics. And that is what is shown in that table.

In other words, your BOD removal will go from 95.8 percent up to 98 percent, and the same thing for nitrogen and phosphorus.

I think the interesting comparison is going over then to the next page and looking at the requirements for a discharge into the Anacostia. The Anacostia discharge, based on our best data we have today, will have to have BOD removal between 98 and 99 percent compared to the year 2000 of 98 percent removal in the main Potomac.

The phosphorus will be between 98 and 99 percent, with 98 percent removal for the Potomac.

The big difference is going to be in the nitrogen removal requirements. For the year 2000 it will require 93 percent in the Potomac versus 96 to 98 in the Anacostia. This is due to our oxygen resources study.

We feel that the Anacostia has already zero potential for any additional oxygen-requiring matter. That is based on current studies where DO currently during summer conditions is less than 2 mg/l right now without any effluent at all.

MR. STEIN: Thank you, Dr. Jaworski.

MR. FREESE: Mr. Chairman, could I ask him a question before he leaves?

DR. STEIN: If you must, go ahead.

MR. FREESE: I must, yes.

I am very confused again -- I seem to be staying that way -- by what has just been said.

It seems to me what we have said is we have the plant on the Potomac River, we are going to have to some day have 98 percent removal of BOD.

DR. JAWORSKI: Correct.

MR. FREESE: So what we ought to do is build a plant on the Anacostia where we only have to have 98 percent.

If we are going to build a plant on Rock Creek, what percent do we have to have?

If we build on Seneca, what percent do you have to have?

If you build on Cabin John, what are you going to have to have?

I don't think we are facing up to the problem.

DR. JAWORSKI: That is not my answer. (Laughter)

MR. McKEWEN: What is your question? (Laughter)

MR. COULTER: I have one question.

MR. STEIN: Go ahead.

Wait, Dr. Jaworski. You know, I thought your explanation was completely lucid and clear, but you see these technical people have further questions.

MR. COULTER: Just one quick question, Dr. Jaworski. When you talk about nitrogen removal, are you talking about the nitrification stage in the treatment process? In other words, mineralization and oxidation of reduced nitrogen to the nitrate stage? Or are you actually talking about taking nitrogen as N out of the water?

DR. JAWORSKI: Both. In the Anacostia. The Anacostia in 1951 and 1957 has had algal blooms. The reason why we don't have algal blooms right now could be -- and to the best of our data -- we have a turbidity problem. And to protect the Anacostia, if we here again take out all the carbonaceous and nitrogenous BOD, we will have a very nutrient-enriched system in which the ratio of wastewater to freshwater flow will be like 20 to 1.

In other words, we will be putting out a fairly high mineralized water which, if the turbidity is reduced-- Because the effluent of a plant of this efficiency will be very clear. And we will be, because of the large volume of wastewater, putting out an effluent which is in essence a nutrient broth for algal cells unless we get rid of the N and the P. And to prevent a huge algal mass from forming in the Anacostia we are recommending the control of eutrophication with this.

MR. COULTER: It is hard to see how a person in his right mind would suggest a sewage treatment plant on the Anacostia, isn't it?

DR. JAWORSKI: Well, I would like to make one further comment in respect to that.

MR. COULTER: May I have an answer to that?

DR. JAWORSKI: No. (Laughter) I think there is --

MR. STEIN: If you said "no," why do we have to continue?

DR. JAWORSKI: If that effluent is aerated to 6 mg/l and those removals obtained, we could actually enhance the water quality in the Anacostia, the current Anacostia water quality, as predicated on three things -- removal of high N and P, the control of oxygen resources, and aerating that effluent.

Based on these premises, it is a long, positive look at the Anacostia, but it is a possibility. I don't know if we are in the position of committing money to do it right now, but that is not my bailiwick. But it is a possibility.

MR. STEIN: When you said "no" and the rest that followed, do I assume that is a "non-answer"? (Laughter)

DR. JAWORSKI: I am not a politician. (Laughter)

MR. STEIN: I think you have established that. (Laughter)

DR. JAWORSKI: No, the point I am putting out is if a positive approach is taken in the Anacostia, along with others, the water could be an actual benefit to the Anacostia if treated properly in the effluent area. That is a positive step. And I think Mr. Coulter pointed this out on a highly treated effluent. It is a possibility, something to explore.

MR. STEIN: Are there any other comments or questions?

(No response.)

If not, I have a --

MR. HADDER: Mr. Chairman, --

MR. STEIN: Yes?

MR. HADDER: I still, frankly, don't feel like I have the answer to the question --

MR. STEIN: Go ahead.

MR. HADDER: -- in something approximating a yes or no as a comparison of achieving the water quality goals between these two plants.

MR. STEIN: All right. I think that is a very valid question.

MR. HADDER: To me there appears to be --

MR. STEIN: Do you want to try that? Or can anyone answer that?

MR. BLAISDELL: I thought Dr. Jaworski answered it. Do you want to rephrase your question, Walt, to make sure I know what I am talking to?

MR. HADDER: Yes. To me there appears to be a difference of opinion in the economies of doing something one way or doing it another. All I want to find out is: Irrespective of the course we take, will both courses lead us to the goal we are trying to achieve? That is to protect the water quality.

MR. BLAISDELL: I would have to say yes.

MR. HADDER: Yes?

MR. BLAISDELL: On the proposal we advance.

MR. HADDER: I said in comparison between the two. Will both take us to the same goal?

MR. BLAISDELL: By "both" you mean the 419 MGD plant on the Potomac?

MR. HADDER: That plan that has presently been adopted and is being implemented as compared to the plan that has been recently been put forward at the conference.

MR. BLAISDELL: I have tried to convey that we have reservations on that.

MR. HADDER: But they are reservations as to whether you get 96 percent or 98 percent removal, not whether you convey it to a point or whether you convey it to diffuse points in the watershed? Is that correct?

MR. BLAISDELL: What I am trying to point out again from the studies that Dr. Jaworski has done is it indicates that the levels that were set at the third conference last year, which were 96 percent BOD and phosphorus, with 85 percent nitrogen, and poundage figures applied against these, would not be adequate to protect the river.

MR. HOPE: Against what?

MR. BLAISDELL: Against degradation.

MR. HOPE: Are we talking specifically about algal growths?

MR. COULTER: Mr. Chairman, I just have one observation. I have in my life followed red herrings, but I feel like I am chasing a flock of them here.

If I understand Mr. Blaisdell correctly, the Secretary of the Interior has approved standards which will result in the desirable water quality in the Potomac River. The standards include both the criteria and a plan of compliance.

Mr. Blaisdell is now telling me that the Secretary of the Interior does not believe that the plan he approved is adequate to meet the water quality criteria, and, therefore, wants a reconsideration.

I propose and suggest that that is a logical thing to do on the basis of new information, but it is entirely illogical to change the standards at an enforcement conference.

The Federal Water Pollution Control Act provides that either the States or the Secretary of the Interior, following proper procedure, can change the plan of compliance. But it is hard to see how you can change the plan of compliance in an enforcement conference to get implementation of the plan.

We are now at Technical Report No. 41. If we are going to change the plan every time we have a new technical report, we will never get any improvement in the water quality of the Potomac River.

The plan, as I understand it, that has been adopted by the Secretary of the Interior, will remove something like 2 lbs. out of every 3 lbs. of pollutants that are now going into the river. It may very well remove far more than that. I think if we succeed with a plan of implementation which has been worked out -- the engineering designs have been made, and grant requests are coming down the line and going through the clearing house -- we can get some improvement in the Potomac River.

But if we are going to be asked to change our plan every time a new technical study is made, the flock of red herrings will simply increase.

MR. STEIN: Mr. Coulter, I have been watching you for years, and out of the corner of my eye, I think, while I have not thought about this before, I have been watching what you have been following, and I will be darned if I would characterize those as red herrings. (Laughter)

Mr. Blaisdell.

MR. BLAISDELL: Jim, I would just like to make one point here. It seems to me that you are getting your apples and your oranges mixed up. Because this is several times that you have referred to standards and the enforcement.

This morning I think you even went so far as to say that you did not have the authority to set standards -- which, of course, is true.

But we are not setting standards here. We are at an enforcement conference that comes up with certain recommendations. As those recommendations affect standards, then another action has got to be taken to change the standards. But it is entirely divorced from any action that we are taking here today.

MR. STEIN: By the way, I think we have come a long way here. Let me try to put these things together and make a proposal to you people. I am really replying to Mr. Hope, to your proposal, of which I hope this last half-hour was a discussion.

You don't sound very enthusiastic.

MR. HOPE: Go ahead. I'm listening.

MR. STEIN: Why don't you go out this weekend and hit a couple of birdies? (Laughter)

Let me make this suggestion. We have had several proposals, and you have heard the proposal of Vinton Bacon and his group. You have heard the views of the conferees. And we have heard the deadlines proposed.

I would suggest we establish a committee, with the chairmanship in Mr. Blaisdell, of the conferees or their designees being represented.

Within 30 days Mr. Blaisdell will report to the conference whether we can get agreement on a proposed course of action of precisely what the various discharges are going to do, together with a time schedule and, of course, the amount of treatment we are going to have and the volume of waste -- at least the maximum volume -- they are going to treat at each point.

I think this might be the best way that we can handle this. Is this agreeable? Everyone can appreciate, especially the conferees, I have not discussed it with them.

Do you think this might be the best way we can do this to try to come up with this within 30 days as to an agreed-upon statement from the Department of Interior and all the local jurisdictions, the States and the interstate agencies, combined?

MR. COULTER: My immediate reaction is that I do not think it is wise. I think there are actions pending right now that represent implementation of the plan of compliance. If as a result of forming a committee or any action that this conference takes it impedes the progress of that plan of compliance, I think we are working directly against ourselves.

MR. STEIN: No, let me --

MR. COULTER: If Mr. Blaisdell and the people in the Regional Office and up to Assistant Secretary Klein's office are willing to abide by the plan of compliance which has been accepted and move promptly with the schedule that we agreed to a year ago in terms of the applications that are now before them and pending in the pipeline, then certainly I would sit down with the Federal officials and my counterparts or anybody else and discuss improvements in the plan.

But if we are going to call a halt to the cleanup of the Potomac --

MR. STEIN: I do not think --

MR. COULTER: -- then I am opposed.

MR. STEIN: There is nothing which will preclude necessarily as one of the alternatives a ratification of what you are going to do.

But there are new plans, new proposals here. And the question is whether you are going to adopt these or not or proceed on the original course.

While you can speak for Maryland dealing with the plan of compliance, I am not sure we have that with all the groups.

I really think that if we proceed without getting the technical people lined up and getting this set, we are going to have differences as we have here. At this stage, it seems to me, the best we can do -- and I am just trying to move this program forward and get together in harness -- is zero in within a month -- I don't think it should take more than a month -- to agree whether we agree or disagree. We have all the facts lined up. Let's see whether we can come ahead, as we have in most other areas of the country, with an agreed-upon cleanup program.

I agree with you, Jim, that all the conference should be concerned with is seeing whether the various dischargers are complying with the remedial schedule or not. This is really our function in the conference whenever we reconvene it, rather than having a soul-searching operation each time to see if we are going to change direction.

But I think what I would like to do, in view of this development, is to let this thing-- I don't know. Maybe I should put this as "cool it."

I am going to be personal now.

(Remarks off the record.)

MR. STEIN: I would like to, if we can, try to work out agreeable solutions so we can get on with the problem.

I appreciate all the mathematical studies, and I really appreciate all the analyses we have done and the advanced methodology and all this stuff. But I would suggest for the past 50 years the Potomac has been polluted, and we have seen no sign of improvement -- of material improvement.

When I say "no sign of improvement," I want to withdraw that statement, because I think when we came here in the 1950's this was pretty bad. We do have a considerable amount of improvement here since the 1950's.

In the 1950's, as Bill Cary, who used to be the health official could tell you, it was dangerous from a health point of view to picnic on either side of the Potomac because of the fecal contamination. If a fly would rest on the river and get on your picnic lunch, given the fly's method of eating and regurgitating, you were faced with a health hazard. I think we have eliminated this.

I have driven across the Potomac twice a day for years. In the 1940's and in the 1950's that river used to stink every day. It doesn't do that anymore. It is just during August now with the algae. So we have made a considerable amount of improvement.

But I would suggest that what is going to improve or move the Potomac cleanup forward is not these scientific or intellectual agreements or disagreements but a program that we can all agree on to clean it up.

Therefore, I would suggest -- and it is my feeling that I don't think all parties are that far apart in the actual program -- we give Mr. Blaisdell and the representatives of this group one month, that we come up with a program and a time schedule, and a time schedule that we are going to agree to. Or if we disagree with it, we will know what we are going to do, and this is based on a technical, scientific basis.

Is this --

MR. FREESE: Mr. Chairman, can I comment on that?

MR. STEIN: Yes.

MR. FREESE: As I recall, last November we were discussing this same sort of thing. The indication was made that, "Well, I think we ought to go and study the problems for 30 days, and we will come back with a solution to a particular problem."

We are here at the table again. We're being asked to go and look at the problem again for 30 days. It does not seem to me that there is anything to be gained by going back and talking and doing subject analyses for another 30 days.

I think what we would like to be assured is that the plan we have submitted and that has been approved is acceptable, or to have the definitive rejection of that plan by your Department. I think that would be much more valuable to us than 30 days of consideration.

MR. STEIN: All right. Now, Mr. Freese, you brought this up. I don't know about the subjective analysis, as far as I am concerned. You kept referring to this, and various other people have.

Whatever you say, as far as I can see, Vinton Bacon gave you an objective, not a subjective analysis. Now the District persisted --

MR. FREESE: I would --

MR. STEIN: -- for these 50 acres over and over again and proceeded with this stuff, and has not come up with its plan. And if you don't want these 30 days, I think you have thrown down the gauntlet.

If you don't want the 30 days and you are not going ahead with this, let us know that you are not going ahead.

I think you have a very generous offer here.

I am not in favor of putting these off 30 days, over and over again. As far as I can see, the District in Blue Plains has been the major source of pollution in the Potomac River since the beginning 1950's. They have come up with a song and dance every time. They have not cleaned it up. You have talked about a sanctimonious operation. You haven't come up with a solution.

If you don't want the 30 days, just say it and we will go ahead.

MR. FREESE: Mr. Klein, I think we ought to --

MR. STEIN: The name is "Stein."

MR. FREESE: I offer my most humble apologies for that slip. I didn't mean it.

MR. STEIN: I consider that a compliment.

MR. FREESE: I am again in my state of confusion. I hope you can help me.

When I came here, and up until this moment, I was under the impression -- and please correct this if it is incorrect, and I would like to have it said in clear terms that I could understand as an engineer because I am not a lawyer -- but I was under the impression that we have a plan; that we have submitted the contracts for consideration by your Department as we move ahead with the pieces of this plan to implement it. We have a time schedule which we are trying desperately to follow.

If this is not correct, it is something we are doing in ignorance.

I think you have said now about five times in the last day and a half that we have not done anything, that we don't have any plans to do anything, and we are just continuing to pollute the Potomac. I would like to understand what you are talking about. I don't understand.

MR. STEIN: If you do not understand what I am talking about, look at the Potomac.

But the issue here is this. You have a plan; that is true. Your plan so far has been predicated upon 50-odd acres which as far as I know you do not have authorization to get.

Mr. Bacon and his group have come up with another plan.

I am not saying in any way, manner or means that your existing plan is deficient. However, what I do say is this: Since this new material has come up, you should give yourself 30 days. And I don't think we are losing anything, because as far as I can see you don't have your financing arranged in the District, and you are not moving ahead apace to achieve this.

If we can agree on getting together with Mr. Blaisdell, taking Mr. Bacon's and his group's views into consideration, determining whether we are going to go ahead with the existing plan or modify the plan, we have not lost a thing.

MR. COULTER: Mr. Chairman, may I say that I am not opposed to 30 days, or whatever it takes to sit down with the Federal Water Quality Administration and thoroughly understand the proposals and the deficiencies in the present proposals and come up with something better if we can come up with it.

What I am asking for is assurance that we will go ahead with the necessary steps to meet the existing water quality standards and that, with the applications that are coming down through the pipeline and will end up on Mr. Blaisdell's and Mr. Jensen's desks very shortly, we are not going to run into a roadblock that says these cannot go forward with Federal grants and Federal approval, and so on and so forth, until we get some kind of agreement out of this group.

I do not like that kind of an axe hanging over our heads, to start with.

Besides that, I think there are straightforward things that have to be done to clear up existing problems to meet existing standards. Those should be first priority.

All I am really asking from Mr. Blaisdell, and from other people who control that flow of paper and authorization, is I just want to make absolutely certain by agreeing to 30 days to see if we can agree that that agreement doesn't mean stopping everything.

MR. STEIN: Well, no, I do not think it will mean stopping everything. As far as I am concerned, I hope we can give you the assurance. But I think in view of the existing situation it would be best to do this:

I think within 30 days, after you work with Mr. Blaisdell, we can reasonably be assured whether you are going to have a program which is going to be cleared as far as we can clear it, or there are going to be any problems. I really do think that this would be the best way to try to work this forward.

I would hope at the end of 30 days, with all deference to the real technical reports we have come out with, and I would ask, that the result of this 30-day operation be a pretty straightforward plan on where you are going to put up the plant, what kind of treatment you are going to have, and when you are going to do it, and that's it.

We can assume when you have done that you are going to meet the water quality and the enforcement requirements.

I think if we stay on that wavelength and agree with that, we can be well ahead.

If we can't agree on that-- And I would hate to come to a parting of the ways here. I think we should give ourselves 30 days to see if we can work this out.

Is this agreeable?

MR. McKEWEN: I would like to add one modest variation of what Mr. Coulter just asked, which is the assurance that with projects now being processed or those actually under construction we do not have to tell the owners, "Stop what you are doing for another 30 days," but that they can proceed both with construction of works under way as well as with processing of grants already submitted.

MR. BLAISDELL: Tom, if you and Jim are inferring that these projects are ones that are going to add additional flow to the Blue Plains sewage treatment plant, then certainly we cannot process those applications until this matter is resolved on what the capacity of that plant is going to be.

So if you are talking about projects that add additional flow to that plant, I can tell you right now we are not going to take any action until this is resolved.

MR. STEIN: I do not recall any such projects. Are there any?

MR. COULTER: Yes, there are.

MR. McKEWEN: There is at least one.

MR. COULTER: Very definitely one.

MR. McKEWEN: The Anacostia pumping station I believe has been submitted to Charlottesville for review, has it not?

MR. BLAISDELL: This is true. And I think it is rather asinine, after all the discussion we have had here today, to ask us to process that application without getting an answer on what we have here.

MR. STEIN: Wait a minute. Before we get into this involvement, I don't think you were referring to anyone personally when you used the word "asinine."

MR. BLAISDELL: I was not. I was using it collectively.

MR. STEIN: But I would suggest that, knowing the processes of government, this Anacostia pumping station or anything else can be considered in this 30-day review.

Again, let me put this out to you as just a proposal. I think this will be the fastest way to get a resolution and get the end result.

MR. COULTER: Mr. Chairman, in the Anacostia Basin there is sewage that overflows periodically the pumping stations now. There are basements that are flooded with sewage.

Based on the plan of compliance which would expand the Blue Plains sewage treatment plant and the county plans that are tied in to the plan of compliance, we have projects which would relieve that water pollution and those health hazards. They are now in Charlottesville.

I think that Mr. Blaisdell has put his finger right on it. Are these projects that ridiculous?

MR. STEIN: I am not sure they are or I am not sure they are not, but may I suggest to the people in Maryland that I think the fastest way to get a resolution worked out to these problems, in view of what I have heard today, is to throw this into this 30-day review. Because I think this will be the fastest way to the ultimate resolution of this.

I think if we quibble about these things, these 30 days are going to pass and we are not going to come to a resolution. The sooner we find out about these, the better.

Let me make this clear to you, Mr. Coulter and Mr. McKewen. I have no judgment about this on what they are going to do, and I have the utmost sympathy with the people in the area. I have been reading about them for years and visiting them socially -- these people who have had their basements filling up. I would like to see that relieved as fast as anyone.

But I am suggesting, given the governmental processes, we probably can get this resolved one way or the other more rapidly through the process I am suggesting.

MR. COULTER: I think probably you are right, Mr. Chairman, as a practical fact. But if we were truly in an enforcement conference and if the Department of the Interior was truly interested in enforcement of the plan of compliance that has been approved by the Secretary, there would be no question here. We would move on with the enlargement of the facilities as spelled out in that plan, and we would relieve those water pollution and health hazards immediately.

I think you are correct as a practical matter that there is a problem here that probably it will take 30 days to resolve, hopefully. If the Department of the Interior insists that we must build a sewage treatment plant on the Anacostia, then I see no way in the world of relieving the problems that we have in that area, both water pollution and health problems, in any reasonable period of time short of something like 5 years. We are going to have to condemn land.

You heard what Professor Bacon said about foundation conditions.

The only existing site where we will not have to move people out literally that I know of is on parkland on an old sanitary landfill which was on top of marshland. If you want some bad foundation conditions, consider those.

If the Federal Government precludes Maryland from any further use of the Blue Plains sewage treatment plant -- we are realists -- we will face those problems and will try to survive. But there will be bitter acrimony. And, furthermore, I do not see how we are moving the Water Pollution Control Act further.

MR. STEIN: Let me make this suggestion. Gentlemen, I am trying to do this in as pragmatic a way as I can to move this problem forward.

You know, every time Jim Coulter speaks he tempts me, because I don't know when I have ever run into acrimony when it has not been bitter.

Considering the situation we are in, if we take these 30 days, we can try to arrive at a judgment whereby we can zero in on the program we plan to go forward with. Or if we cannot, I think it will be abundantly clear and there just should be an announcement.

I think we have heard enough of the discussions here, and we will just have to use our open society legal process to adjudicate any differences. I would hope there would not be any differences.

What I am suggesting is we take this 30 days to see if we can resolve the difference.

Now, let me give you my personal opinion. I think what we are dealing with here is a difference really in approach. I do not think we are dealing with the Interstate Commission, the District, Virginia, or Maryland, or any of the people here who want to see a dirty river or pollution. There may be honest differences, or maybe some of these engineers will characterize these otherwise as something less than honest differences, as to the approach.

But as far as I could see, I think it is abundantly clear that the Federal Government does not have a patent on the desire for clean water. The District of Columbia, Virginia, Maryland, the Interstate Commission want clean water in the Potomac as much as we do. I think it is the question just of adjusting the details and adjusting the program and adjusting the dates.

Now, let me divorce myself from all you people, because I have a real problem with this in this District operation. We have dealt with many cases -- the Calumet, Lake Michigan, Lake Erie, the Colorado River, and so forth and so on. You name it. The Hudson River. If you go on to name all the major rivers and major cities in the country, I have been there. We have in all these cases arrived at an agreement among the State agencies involved, the interstate agencies, and the Federal Government on what is necessary to clean up on the compliance schedule.

When we come to these conferences, the thing that I generally am concerned with is whether a city or an industry is in compliance with the schedule, whether they put in the works, whether they've met the deadline.

I think one of the real problems we have had on the Potomac is every time we come in we just cannot get down to that "nuts and bolts" operation of how we are moving forward to the cleanup, but we keep asking ourselves those soul-searching questions of what the cleanup should be.

If you want to pull yourself apart like a Dostoevski novel, that is okay with me, but that is not going to clean up the Potomac. I think the closer we can come to this agreement and the closer you can give me my charge of moving forward and checking with the various constituents here to see whether they are in compliance with the agreed-upon schedule, the closer you are going to be to clean water.

I will say this for everyone here. When you give me the kind of job we have now, after we have been through this time after time, still coming back and deciding what we are going to do, I am not sure we are moving forward.

MR. McKEWEN: Could I add a word of agreement -- unaccustomed? (Laughter)

MR. STEIN: Yes.

MR. McKEWEN: And could I make one final -- I hope -- comment?

MR. STEIN: Yes.

MR. McKEWEN: I agree that it would be wise at this point to have a 30-day period in which to try to reach agreement, primarily for the negative reason I have lost confidence that we will reach any kind of resolution here today.

Could I, however, make just this one request, which I think is reasonable. I am confident that Mr. Blaisdell is right that they are not going to issue a grant on, let's say, the Anacostia pumping station during this 30-day period, because I am sure that he is not an asinine person and would be more prudent than that.

However, I think it is reasonable -- and bearing in mind your implication that it does take time to have these things processed through the machinery -- and I think it would be equitable to have the processing of that application proceed, to have the work necessary to review it done, so that we would not necessarily lose this 30-day period.

If we do reach resolution which would permit that pumping station to proceed, we will have gained the 30 days by having it in review at this point rather than having it lost altogether.

MR. BLAISDELL: Tom, this is normal operating procedure within our construction grants office, insofar as our staff will permit.

You must bear in mind, of course, that we are responsible for some 5 other States other than the District of Columbia or in addition to the District of Columbia.

So I do not mean to say that we are not going to actually look at the application from the standpoint of whether it is complete, whether it is eligible, et cetera. What I am saying is we are not going to take any action until we get the other matter resolved. We cannot. And I think you can understand why.

MR. McKEWEN: It won't be left hanging until the 30 days are over, if I understand?

MR. BLAISDELL: No. I think the application has actually been reviewed to some extent already. And if it isn't, certainly within a 30-day period I would expect it would be. It has its place in the normal assignment of workload in the office.

We cannot very well pull it out and put it ahead of something else.

MR. McKEWEN: I can take that as a "yes" answer?

MR. BLAISDELL: What?

MR. McKEWEN: I can take that as a "yes" answer?

MR. BLAISDELL: Just what part of that do you want to take?

MR. McKEWEN: That you will continue the review of the application -- that it will not be held up.

MR. BLAISDELL: We will continue our normal procedure, which will be to process the application when it reaches a certain level in the office.

MR. McKEWEN: The decision would --

MR. BLAISDELL: In other words, if there are 40 applications ahead of that one, we have got to act on 40 applications before we act on yours.

MR. McKEWEN: I think I had better take that as a "yes" answer. It is as close as I am going to get.

MR. STEIN: Let me ask you --

MR. BLAISDELL: You do not want me to pull it out and put it No. 1, do you? That would be unfair.

MR. STEIN: The answer is yes. All right.

Are there any other comments or questions?

MR. FREESE: Mr. Chairman, excuse me.

MR. STEIN: Yes?

MR. FREESE: As I recall, 30 days from Monday we are required to meet back before Senator Tydings and his group to report essentially on the same thing that you have indicated here we will report back to this group. Is there any intention on your part that these will be coordinated?

MR. STEIN: I had not thought of that. What do you suggest? When will 30 days from now be?

MR. FREESE: June 25.

MR. STEIN: We are not going to upstage the Senator. If anyone has to appear before the Senate Committee, we will defer to that.

Recognizing this, my suggestion would be, Mr. Blaisdale, to get together with your group and for you to check into the Senate hearings and any other obligation you might have and set an appropriate date as close as you can to 30 days when you can report.

MR. BLAISDELL: I am sure that can be done.

MR. FREESE: You are asking us to prepare essentially the same package of material that Senator Tydings is asking for, and I am wondering if there is any need to do it twice.

MR. STEIN: Well, I don't know that there is any need to do it twice. You know, I have been a bureaucrat for 30 years. Any time I can get a package for the Senate and a package for you, I figure I am ahead. If I can get it for the House too, then I am really ahead and I can head for the nearest place of amusement. (Laughter)

MR. COULTER: May I ask a couple of things?

MR. BLAISDELL: Before we get off of that, let me just straighten this out again.

Paul, all we want at the end of a 30-day period is an agreement between the District and Washington Suburban as to what they are going to do. We would not expect to have data submitted in the detail that I am sure you are preparing it for Senator Tydings' Committee.

But within 60 days, then, we would expect to have your scheme and your implementation plan.

MR. STEIN: Why don't we hold this back. Let me make a suggestion. Before we decide what we are going to do at the end of the 30 days, why don't we let you people come to a meeting and decide what you are going to produce at the end of the 30 days, and we will let you set your ground rules. Okay?

MR. COULTER: Just a quick question to Paul Freese. Paul, the 51 acres of mud flats have risen up out of the river again. It was my understanding from Secretary Klein's comments on March 25 the expansion could be accommodated without filling that land. Do I understand that the applications that are now going forward have nothing at all to do with that or there is no request attached to them for any land-filling?

MR. FREESE: That is correct. We have not raised the question at all. I think the only question that has been raised here at this table has been by the chairman.

MR. STEIN: That is right. I was responding to those mosquitoes. (Laughter)

MR. COULTER: Has Mr. Hope withdrawn his motion?

MR. STEIN: No, no. His motion is carried. (Laughter)

His motion is carried. I take it that it is carried with embellishment. (Laughter)

As I take it, we are going to move ahead and let Mr. Blaisdell set up his group within 30 days. You will set up your ground rules on what you are going to report on, and hopefully you are going to report on an agreement.

What I would like to see and what I would suggest is we come up with an agreement on the remedial program and what we are going to do, where we are going to do it, the degree of treatment, and the date. That is all that we really need.

If we do not do that, then you come up with an agreement to disagree and we will proceed from there.

MR. COULTER: And it is our agreement that we still work within the conference?

MR. STEIN: Yes?

MR. COULTER: Mr. Blaisdell mentioned something about an agreement between WSSC and the District of Columbia, which would clearly put this in the hearing stage instead of the conference stage.

Unless you want to move directly to deal with these discharges, I would suggest that you deal with the State regulatory agency.

MR. STEIN: We are dealing with the State. Any time I go behind you and deal with your individual polluters, you will hear from me first. That will be the day. (Laughter)

MR. HOPE: Mr. Chairman, in view of my spectacular success -- (Laughter) -- in achieving the acceptance of the resolution, may I also make another motion then that the meeting be adjourned?

MR. STEIN: That is the best one I have heard so far. (Laughter)

MR. BLAISDELL: I would like to have some clarification still here on what my role is going to be in this committee.

MR. STEIN: Okay. You know, from the parliamentary point of view, of course, Malcolm's motion has precedence.

MR. HOPE: It has precedence.

MR. STEIN: Do you want that, or do you want us to --

MR. HOPE: I would feel, Mr. Chairman, that you and Mr. Blaisdell may well work out the details of this and let us know.

MR. STEIN: Yes. Very briefly, Mr. Blaisdell, you will be the chairman and call this together, but we will deal with this later.

The motion to adjourn is in order. When we have a motion of that kind, under parliamentary rules we cannot consider anything else.

Do I find any objection to that?

MR. COOK: May I suggest that we enter these other reports in the record?

MR. STEIN: Yes. Do you have any objection?

MR. HOPE: No objection.

MR. STEIN: The other reports that we had listed will be entered into the record as if read.

(The reports referred to follow:)

STATEMENT OF
GROVER W. COOK, DIRECTOR,
OFFICE OF ENFORCEMENT AND STANDARDS
COMPLIANCE, MIDDLE ATLANTIC REGION,
FEDERAL WATER QUALITY ADMINISTRATION

STATEMENT OF PROGRESS
POTOMAC RIVER-WASHINGTON METROPOLITAN
AREA ENFORCEMENT CONFERENCE

MR. COOK: Mr. Chairman, conferees, ladies and gentlemen: I am Grover W. Cook, Director of the Office of Enforcement and Standards Compliance, Middle Atlantic Region, Federal Water Quality Administration.

The summary of the Potomac River-Washington Metropolitan Area Enforcement Conference was issued by the Secretary of the Interior Walter J. Hickel on June 13, 1969. The summary contained 15 recommendations that were unanimously agreed upon by the conferees on May 9, 1969.

Recommendation 15 called for progress meetings to be held in May and November each year, at which time the States, the Interstate Commission on the Potomac River Basin, and the Federal Water Quality Administration would present progress reports on the recommendations for which each has a specific responsibility.

This statement will report the status of compliance by the Federal installations in the conference area with Recommendation 1 and 2, FWQA activities in regard to Recommendations 4, 10 and 12.

In addition, a discussion of research and development in the area is included because of the bearing these projects may have on future pollution control.

Recommendation No. 1 called for construction of wastewater treatment facilities on a schedule that included completion of preliminary planning by March 1, 1970 for all installations except the Pentagon and Ft. Belvoir plant No. 2 where the date was April 1, 1970. All of the Federal facilities were in compliance on the due dates. They are also in compliance with Recommendation 2 which calls for disinfection of the effluent.

The plans for each facility are as follows:

Naval Communications Station, Cheltenham, Prince George's County, Maryland: The installation operates a 50,000-gallon-per-day secondary waste treatment plant. Plans have been made for connection to the Washington Suburban Sanitary Commission system. Funds for the connection have been programmed for inclusion in the FY 1972 budget request.

Naval Ordnance Laboratory, White Oak, Silver Spring, Montgomery County, Maryland: The installation operates a 100,000 GPD waste treatment plant. The Navy is negotiating with WSSC to determine the feasibility of connecting to the WSSC system. Funds have been programmed for inclusion in the FY 1972 budget request.

Fort Belvoir, Fairfax County, Virginia: The installation operates two secondary waste treatment plants which have a total flow of approximately 2.2 MGD. The Army is negotiating with Fairfax County to connect to the Accotink-Pohick system if such should prove feasible. If the connection does not prove feasible, the installation will construct their own advanced waste treatment facilities. The consulting firm of Alexander Potter and Associates has been retained by Fairfax County to determine feasibility of such a solution. Project funds have been requested in the FY 1971 budget.

Pentagon Waste Treatment Plant, Arlington County, Virginia: The General Services Administration operates this secondary treatment facility which treats approximately 1.2 MGD. GSA is proceeding with preliminary plans to construct on-site advanced waste treatment facilities. Project funds have been programmed for inclusion in the FY 1971 budget request.

Andrews Air Force Base, Prince George's County, Maryland: The installation treats approximately 1.0 MGD in 3 secondary waste treatment plants. Two of the treatment plants discharge to the Potomac River Basin via Piscataway Creek and a third to the Patuxent River Basin. The Base is negotiating with WSSC in an effort to obtain a municipal connection if such proves feasible. Project funds have been requested in the FY 1971 budget.

An installation that was not previously reported in the previous sessions of the conference was the Agricultural Research Center, Prince George's County, Maryland. The treatment plant serving the West Area treats approximately 160,000 GPD before discharge to Little Paint Branch. The treatment plant serving the East Area treats approximately 400,000 GPD before discharge to Beaver Dam Creek. The research center has been informed that the 2 plants will have to be upgraded to advanced waste treatment commensurate with the other plants in the conference area.

Recommendation 4 dealt with planning for future waste treatment needs. In response to directives of the conferees at the November 6-7, 1969 progress meeting; the Federal conferee conducted 2 special meetings of the conferees, on December 19, 1969 and on January 27, 1970. A plan of study has been developed and adopted for implementation of the study requirements of Recommendation 4.

The basic plan of study reflected in the flow chart is composed of 3 parallel thrust lines denoting those activities necessary to effective short-term and long-term planning with appropriate feedback loops. Within the organizational structure the conferees assume the "review and guidance" role, while the FWQA serves the study in the role of secretariat. A Short-Term Planning Committee will establish priorities and coordinate the efforts of 5 task forces assigned to specific elements of the short-term planning activities. Long-term planning activities will draw on those elements of the Metropolitan Washington Council of Governments' Urban Water Resources Planning Project, being considered for funding by FWQA and Office of Water Resources Research.

The organizational meeting of the Short-Term Planning Committee was held May 5; the Task Forces are currently being organized, and a joint Committee-Task Force coordinating meeting is scheduled for June 30.

Submitted for the record are copies of the summaries of each reported meeting and the adopted study organization. Recommendation No. 10 called for a survey of oil pollution potential. The Oil Survey Committee is proceeding in accordance with the schedule presented to the conferees in November 1969.

Approximately 115 sites were visited by members of the committee in the field survey phase. An inventory of significant oil handling facilities in the conference area has been completed. The committee's report of findings and recommendations for oil pollution abatement actions will be presented to the conferees as scheduled at the November 1970 progress meeting.

On April 3, 1970 the President signed the Water Quality Improvement Act of 1970. The Act contains sections on 2 areas of pollution control that were considered by the third session of this conference, namely, control of pollution by oil and hazardous materials, and control of sewage from vessels. Regulations and standards are now in preparation by the Coast Guard and the Department of the Interior. These agencies are also preparing a National Contingency Plan to deal with spills of oil and hazardous materials. The findings of the oil pollution survey will become a part of that plan.

Research and Development Projects

FWQA-DC Pilot Plant at Blue Plains

The FWQA-DC pilot plant at Blue Plains is currently engaged in a research plan consisting of 5 major components, as well as some supporting laboratory-scale activities. The major components are as follows:

1. Conventional - tertiary treatment: The system consists of primary sedimentation, step aeration, secondary sedimentation, 2-stage lime precipitation with intermediate recarbonation, ammonia stripping, and filtration at an average flow of 100,000 GPD. Steady-state start-up was 2/1/70 with a key decision on air stripping scheduled for 7/15/70 and a system program

review of 8/15/70 for this component as well as all of the others. Objectives are high degrees of removal of phosphorus and nitrogen and moderately high levels of carbon following conventional secondary treatment. Advantages include more proven systems with possibility of reclaiming lime.

2. Independent physical - chemical treatment: The 100,000 GPD system consists of 2-stage lime precipitation with intermediate recarbonation, filtration, pH control (water stabilization), selective ion exchange (for ammonia removal), carbon adsorption, and laboratory scale ozone oxidation. Start-up was 2/11/70. Objectives are complete waste treatment from raw sewage through high degrees of removal of phosphorus, nitrogen, and carbon. Advantages include elimination of biological processes, reduced space requirements, and possibility of reclaiming lime.

3. Mineral addition -- conventional -- tertiary treatment: The system includes conventional primary treatment aeration with mineral addition (alum or iron salts), secondary sedimentation, and filtration or alternately carbon adsorption at pilot flows of 2,000 GPD as well as laboratory scale. Steady-state start-up is scheduled for 6/1/70. Objectives are equivalent degrees of removal of phosphorus and carbon as conventional-tertiary treatment with less capital facilities. Advantages include reduced capital costs and space for phosphorus removal.

4. Solids handling and recalcination: The system consists of a thickener, vacuum filter alternately with a solid bowl centrifuge (available 7/70), and a 6-hearth furnace and will alternate between sludges from the conventional-tertiary and the independent physical-chemical treatment processes. Start-up was to be 3/15/70. Objectives are to develop and evaluate methods of handling and reusing chemicals resulting from advanced waste treatment processes.

5. Pure oxygen process: The system, at an average flow of 100,000 GPD, follows D. C. conventional primary treatment and consists of accelerated activated sludge using pure oxygen and sedimentation for carbonaceous BOD removal followed by second-stage activated sludge using pure oxygen and sedimentation for nitrification. The flow is then to be denitrified using other biological methods or carbon columns. Lime addition with clarification and/or filtration for phosphorus removal will be employed, and then carbon columns for polishing and refactory organic removal.

Initial start-up was on 5/13/70. The nitrification-denitrification phase will commence in approximately 1 month. Objectives are to reduce size of treatment units for carbonaceous BOD and nitrogen removal, streamline lime precipitation treatment by reducing chemical dosage and sludge production and eliminate clarifier in solids removal stage, and achieve high degree of carbon removal. Advantages include reduced space requirements, reduced chemicals and sludge production, and potentially makes nitrification-denitrification practical for large metropolitan treatment plants such as Blue Plains.

The laboratory-scale studies include ozone oxidation as a replacement for carbon column effluent polishing and break point chlorination for nitrogen removal.

Combined Sewer Systems - D. C.

In June 1968 the Federal Water Quality Administration approved a contract with the consulting engineering firm, Roy F. Weston, to help define the problems of combined sewer discharges within the District of Columbia; investigate the feasibility of high-rate filtration for the treatment of combined sewer overflows; and to study alternative methods of solution to the problem. The project is nearing completion and the final report is being prepared.

Kingman Lake Area, Anacostia Park

On October 8, 1969, Secretary of the Interior Walter J. Hickel announced combining the features of stormwater treatment and recreational development in the Kingman Lake area of Anacostia Park. The project, as presently conceived, will treat overflow from the Northeast Boundary Trunk combined sewer and make-up water from the Anacostia. The plant output will be discharged into a series of small lakes. The first lake following treatment will contain aesthetically attractive aerators and can be used for fishing and boating. The second lake will be utilized for bathing.

Aerial photography and soil borings are complete. Topographical mapping and feasibility studies will be completed in June 1970.

Piscataway Advanced Waste Treatment Facility

This demonstration project, to be located at the Piscataway waste treatment plant, became active in June 1969 when an original Federal Water Quality Administration grant of $1,650,000 was supplemented by a grant of $750,000 to permit construction of a full-scale advanced treatment plant, utilizing techniques developed at Blue Plains. The facility will employ 2-stage "high lime" treatment with intermediate recarbonation, dual-media gravity filters, stabilization and carbon adsorption with regeneration. The detailed design was completed on April 10, 1970; bids are to be advertised in June 1970, and construction is to be completed in the summer of 1971.

* * *

ENFORCEMENT CONFERENCE RECOMMENDATION 12

STREAM MONITORING REPORT

PREPARED BY STREAM MONITORING SUBCOMMITTEE

I. Introduction

The Stream Monitoring Subcommittee, in accordance with the guidelines provided in their report of September 23, 1969, has continued to pursue the completion of a comprehensive stream monitoring program. Additional inventory data has been solicited from each of the previously participating agencies and each of the Federal installations in the enforcement conference area. Additional stations were reported by the Air Force at the Andrews Airforce Base Installation and the Army at the Ft. Belvoir Installation.

II. Stream Monitoring Inventory

A total of 107 stations have been identified in that hydrologic portion of the Potomac Basin between Little Falls and Hallowing Point. The following updated tabulations provide a current summary of existing stream monitoring activities.

SUMMARY OF STATIONS - by Agency

DCDPH	15
DCDSE	24
FWQA	16
MDWR	17
VSWCB	21

Stream Monitoring Report

SUMMARY OF STATIONS - by Agency (Continued)

COE	1
USAF	6
ARMY	7
Total	107

SUMMARY OF STATIONS - by Agency

Quarterly	23
Monthly	35
Weekly	38
Daily	1
Continuous	3
Other (Periodic)	12

SUMMARY OF STATIONS - by Parameter

Dissolved Oxygen	100
BOD	70
Fecal Coliform	57
Total Nitrogen	46
Total Phosphorus	14

Station information, supplemental to that included in the previous stream monitoring subcommittee report, as extracted from Appendix "A" and the accompanying map are summarized on page 4.

Stream Monitoring Report

III. Inventory Review and Comments

Preliminary effort has been expended toward the evaluation and recommendation of a stream monitoring and data reporting system. Direct and indirect discussions have been held relative to further coordinating data collection and reporting activities. In certain instances these discussions have yielded pertinent facts relative to the effort and activities presently being expended by the several agencies involved in stream monitoring. Specific findings which relate to the development of a fully coordinated monitoring system include the following:

1. The D. C. Department of Public Health and the D. C. Department of Sanitary Engineering have altered their data reporting format to allow more expeditious handling of data by the Interstate Commission on the Potomac River Basin. This facilitates the centralized storage of data in computerized format. The Interstate Commission on the Potomac has prepared their 1969 Annual Compilation of Data in the Potomac River Basin utilizing computerized output from FWQA's STORET system.

3

SUMMARY OF SAMPLING ACTIVITIES

IN ENFORCEMENT CONFERENCE AREA

New Stations

	DCDPH (revised)					USAF Andrews AFB					ARMY Ft. Belvoir																			
PARAMETER*	W	M	Q	A	P	W	M	Q	A	P	W	M	Q	A	P	W	M	Q	A	P	C	W	M	Q	A	P	W	M	Q	D
Oxygen, Dis.	15							6																						
Temperature	15							6							5															
pH	15							6																						
BOD, 5 day	15							6																						
Coliform, Fec	14																													
Coliform, MPN	15																													
Coliform	14							6																						
Total N																														
Total P																														
Other Nutrients								6																						
Alkalinity																														
Acidity																														
Hardness																														
Pesticides																														
Radioactivity												1			3															
Oil	3							6																						
Phenols								6																						
Total Organic Carbon																														
DOC																														
MBAS																														
Chloride																														
Fluoride								6																						
Color	14							6																						
Odor								6																						
Conductivity																														
Suspended Solids	14							6																						
Dissolved Solids																														
Total Solids	14																													
Turbidity	15							6																						
Trace Elements								6																						
Plankton																														

*Frequencies

D-Daily Q-Quarterly W- Weekly A-Annual M-Monthly P-Periodic C-Continuous

2. The State of Virginia is utilizing a river-mile-index system developed in conjunction with FWQA several years ago to facilitate data retrieval in their State data handling system.

3. The State of Maryland is in the process of developing a computerized data handling system which will be compatible with the STORET system.

4. Initial input on data requirements has been obtained as a result of discussions between the staff on FWQA's Chesapeake Technical Support Laboratory and the D. C. Department of Public Health and the D. C. Department of Sanitary Engineering.

5. The States of Virginia and Maryland have begun participation in FWQA's Analytical Quality Control Program.

IV. Conclusions

The following conclusions are made based on the activities of the Stream Monitoring Subcommittee:

1. Preliminary input on data needs has been obtained. Additional effort must be expended in this area.

2. A thorough review of the inventory is contingent upon completion of item 1 above.

3. Considerable coordination has been effected in a direct and indirect manner. Joint agency meetings must be held to precipitate full coordination. Data reporting, Analytic Quality Control procedures, central storage of data,

and river mile points are being further coordinated. Certain facts as outlined in items 1 through 5 under Inventory Review and Comments, indicate that these areas should lend themselves to full coordination in a timely manner.

4. The subcommittee will proceed with the design of a fully integrated and coordinated stream monitoring program in accordance with the schedule outlined in their report of September 23, 1969.

APPENDIX A

ADDITIONAL WATER QUALITY MONITORING STATIONS
IN THE POTOMAC RIVER BASIN
FROM HALLOWING POINT TO LITTLE FALLS

STATION NO.	NAME OF BODY OF WATER	STATION LOCATION	AGENCY	REMARKS
N-1	Potomac River	Off Hallowing Point	ARMY	
N-2	Potomac River	Mouth of Gunston Cove	ARMY	
N-3	Gunston Cove	Middle of Cove opposite Gunston Hall	ARMY	
N-4	Gunston Cove	Cooling Water Inlet, SM-1 Power Plant	ARMY	
N-5	Gunston Cove	Cooling Water Outlet, SM-1 Power Plant	ARMY	
N-6	Gunston Cove	Rear of Cove Opposite Building S-699	ARMY	
N-7	Potomac River	Just above Gunston Cove	ARMY	
N-8	Trib. to Piscataway Cr	Andrews AFB, in front of Outdoor Range	USAF	USAF No. 3
N-9	Trib. to Piscataway Cr	Andrews AFB, in front of Sanitary Fill Area	USAF	USAF No. 2
N-10	Paynes Branch	Andrews AFB, below STP #4 on Md. Rt. 5	USAF	USAF No. 4
N-11	Meeting House Branch	Andrews AFB, below STP #1 on Md. Rt. 5	USAF	USAF No. 5
N-12	Trib. to Henson Cr.	Andrews AFB, NE of watch tower on Perimeter Road	USAF	USAF No. 6
N-13	Trib. to Henson Cr.	Andrews AFB, Allentown Road off North end of Runway 1L	USAF	USAF No. 7
N-14	Ft. DuPont Park Cr.	Minnesota Avenue	DCDPH	
N-15	Ft. DuPont Park Cr.	Texas Avenue	DCDPH	
N-16	Watts Branch	Kenilworth Avenue	DCDPH	
N-17	Watts Branch	Southern Avenue	DCDPH	

APPENDIX A

STATION NUMBER	BOD	Coliform (Fecal)	Coliform (MF)	Coliform (Total)	Color	Dissolved Oxygen	pH	Radioactivity, Sediment	Radioactivity, Water	Solids, Suspended	Solids, Total	Temperature	Turbidity	Group C
	PARAMETERS													
N-1								M	M					
N-2												P		
N-3												P		
N-4									P			P		
N-5								M	P			P		
N-6												P		
N-7								M	W					
N-8	Q			Q	Q	Q				Q		Q	Q	Q
N-9	Q			Q	Q	Q				Q		Q	Q	Q
N-10	Q			Q	Q	Q				Q		Q	Q	Q
N-11	Q			Q	Q	Q				Q		Q	Q	Q
N-12	Q			Q	Q	Q				Q		Q	Q	Q
N-13	Q			Q	Q	Q				Q		Q	Q	Q
N-14	W	W	W	W	W	W	W			W	W	W	W	
N-15	W	W	W	W	W	W	W			W	W	W	W	
N-16	W	[illegible]	[illegible]	W	W	W	W				W	W	W	
N-17	W	W	W	W	W	W	W			W	W	W	W	

R E M A R K S

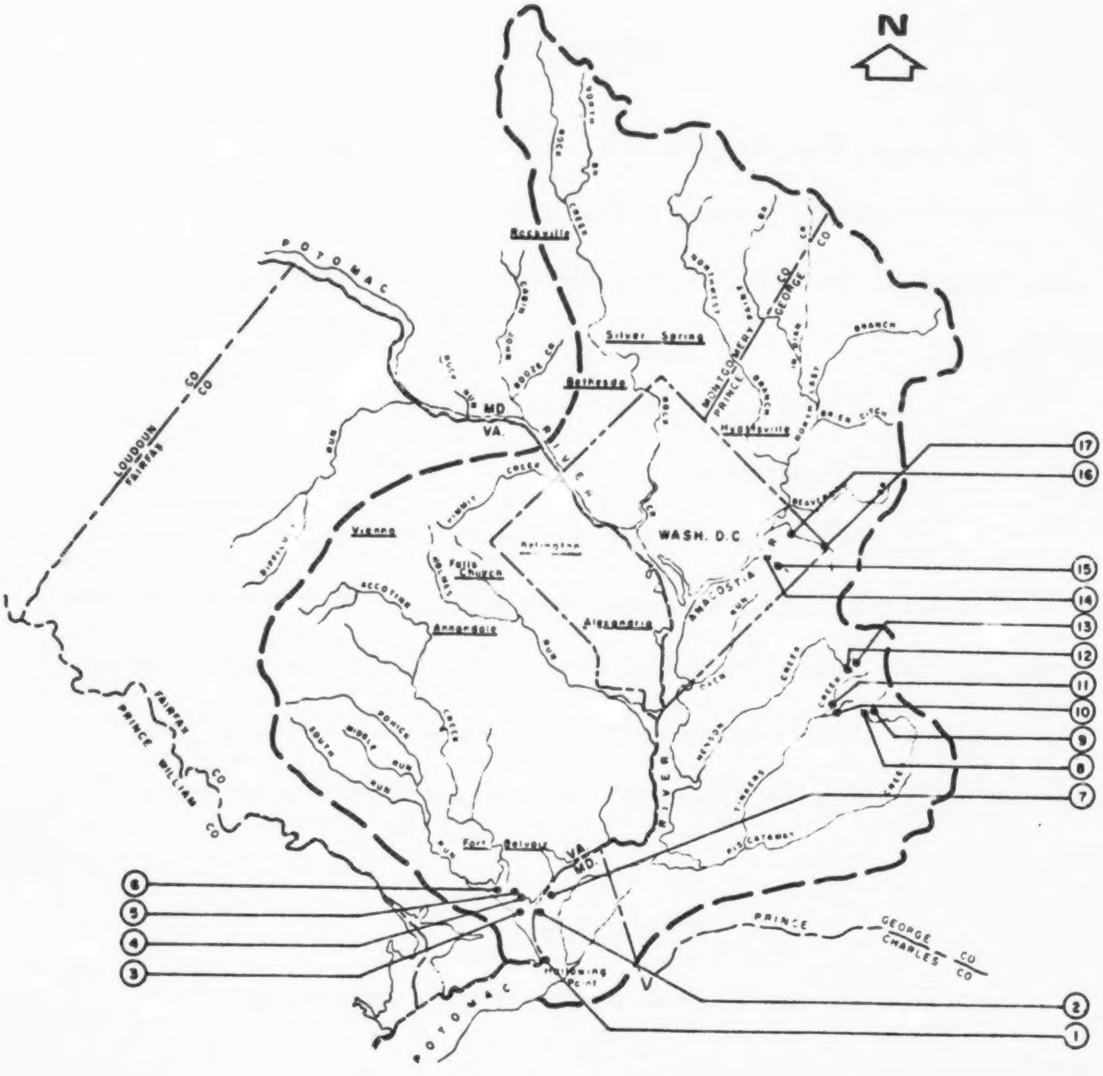
Group C:

Cadmium
CO$_2$
Chromium
Copper
Cyanide
Fluoride
Hexavalent Chromium
Iron
Lead
Manganese

Nitrogen (Nitrate)
Odor
Oils and Greases
Phenols
Phosphate, Ortho
Silver
Sulfate
Surfactants
Zinc

Frequency Code

M = Monthly
P = Periodic
Q = Quarterly
W = Weekly



ENFORCEMENT STUDY AREA

ADDITIONAL STATIONS

REPORT OF THE SUBCOMMITTEE ON SURVEILLANCE OF WASTE TREATMENT PLANT OPERATIONS

PURPOSE

The subcommittee was directed to develop a comprehensive surveillance program on the effectiveness of waste treatment plant operations in the enforcement conference area.

PROCEDURE

The study was conducted in 2 phases:

1. Inventory
2. Evaluation and recommendations

The surveillance program for each plant was inventoried and a preliminary evaluation was presented at the November 1969 progress meeting of the enforcement conference. These plant inventories have been distributed to representatives of the conferees.

EVALUATION

The evaluation considered both the operating and regulatory agencies.

Operating Agencies.

Job Qualifications

The subcommittee considered that an integral part of a surveillance program of waste treatment plant operations is the qualifications of the supervisory personnel, in particular, the directors of operations and laboratories.

Subcommittee on Surveillance

The subcommittee found that the operations directors were in general well qualified to direct operations of the existing plants. The job specifications for the operations directors at the larger plants were adequate, but the job specifications at several of the smaller plants need to be upgraded, particularly the Federal installations. Since advanced waste treatment processes are being required of the plants in the enforcement area, the training requirements and capabilities of the operations directors must be maintained at a high level and this should be reflected in the job specifications.

The subcommittee believes the regulatory agencies should review job qualifications necessary at all levels of plant operations. The complex processes planned and under design will require extensive training of all operators. This has been particularly neglected in some smaller plants and the regulatory agencies may wish to concentrate initial efforts on these plants.

The additional training requirements for the laboratory directors to adapt a testing program for an advanced waste treatment plant may not be as demanding as the operators, but the number of parameters analyzed and in many cases the frequency will increase. The additional testing program may impose a hardship on the smaller plants, but this may be overcome by having most of the testing performed by a central laboratory.

Operator Training and Certification Programs

The States of Maryland and Virginia and the District of Columbia offer operator training programs. These programs will need to be expanded to provide more intensive training in advanced waste treatment processes.

The States of Maryland and Virginia have a mandatory certification program, but the Virginia program was not established until the 1970 session of the legislature. Mandatory certification is currently under consideration in the District of Columbia. The District of Columbia has only one plant and the consideration of mandatory certification in the District of Columbia is somewhat different than in the States.

The subcommittee suggests that a high-level certification be required of all operators of advanced waste treatment plants regardless of plant size.

Manpower

The subcommittee found that sufficient personnel were authorized to properly operate the treatment plants. Several vacancies were noted, but were not at a critical level.

Increased staffing will be required to operate the new facilities, but if proper training and salaries are provided, manpower need not be a problem in the future.

Subcommittee on Surveillance

Data Collection and Reporting Systems

The subcommittee found that the data collection presently practiced was adequate, but will need to be expanded in the new plants.

The reporting systems are inadequate. The monthly reports contain sufficient analytical data, but insufficient narrative description is included to permit a proper evaluation by the regulatory agency. Malfunctions in the system and removel of units from service for major maintenance should be included in sufficient detail to give a comprehensive view of system performance.

The reporting systems for unusual or emergency discharges are inadequate and should be corrected as soon as possible. The regulatory agency should clearly define for each plant what constitutes an unusual discharge. The subcommittee suggests that a predictable overflow in the system does not constitute an unusual discharge and need not be reported on an emergency basis. The regulatory agency must have sufficient knowledge of the system to recognize the areas where predictable discharges occur. These overflows should be monitored and included in the monthly reports. The progress toward reducing and eliminating these overflows could be included in the narrative section of the report. The discharge of untreated or partially treated wastewater because of a failure in the system should be considered an unusual discharge and reported immediately by telephone or telegram to the regulatory agency and the details confirmed by letter.

REGULATORY AGENCIES

Manpower

The surveillance programs of the regulatory agencies are hindered by manpower limitations. The severity of the problem varies with each agency.

Surveillance Activities

The subcommittee believes plants have not been inspected with sufficient frequency and suggests each plant in the conference area be inspected quarterly. To avoid duplication, the Federal Water Quality Administration and the State regulatory agency should alternate quarterly inspections of Federal installations with each agency receiving a copy of the inspection report.

The subcommittee believes that the surveillance program in the conference area can be better coordinated by utilization of a standard inspection form. A copy of the inspection report should be left with the operator and receipt acknowledged by his signature. The regulatory agency should emphasize programs and schedules for the elimination of deficiencies. Space should be provided on the form for the operator's comments.

Subcommittee on Surveillance

An important function of the regulatory agency is the evaluation of the accuracy of the plant operating reports. The regulatory agency should have a laboratory evaluation and verification program. The program should include an evaluation of the physical facilities and analytical techniques; and a periodic verification of the results by analysis of duplicate samples by the plant laboratory and the regulatory agency. The methods for reporting plant malfunctions, deficiencies and unusual occurrences should be reviewed in detail with the operator.

The regulatory agency should establish a deadline for receipt of the monthly reports and analyze the reports immediately upon receipt. The analysis should be performed by the same individual or individuals each month to insure continuity. If unusual or inconsistent results are found, a follow-up study should be initiated immediately.

Subcommittee on Surveillance

RECOMMENDATIONS

The subcommittee recommends that:

1. Each regulatory agency in the conference area initiate programs to correct the deficiencies described in the evaluation section of this report.

2. The Interstate Commission on the Potomac River Basin or the Federal Water Quality Administration be designated as a coordinating agency to disseminate surveillance data to the conferees.

3. Each regulatory agency submit a semi-annual report to the coordinating agency which will include:

   A. A plant performance data summary with special emphasis on the constituents restricted by the conferees.

   B. A narrative description of the plant operations.

   C. A summary of inspection activities including routine and emergency inspections.

4. The coordinating agency submit to the conferees a summary of the reports of the regulatory agencies.

5. Regulatory agency immediately notify the coordinating agency of all unusual discharges.

6. This subcommittee be dissolved.

Subcommittee on Surveillance

RESPECTFULLY SUBMITTED:

C. E. Gross (Maryland)

Robert Perry (D. C. Department of Sanitary Engineering)

F. Lee Ross (Federal Water Quality Administration)

Arnold Speiser (D. C. Department of Public Health)

Millard H. Robbins, Jr., Chairman (Virginia)

* * *

STATEMENT OF SURVEILLANCE BRANCH, MIDDLE ATLANTIC REGION, FEDERAL WATER QUALITY ADMINISTRATION, U. S. DEPARTMENT OF THE INTERIOR

- - -

PRELIMINARY STUDY OF SEDIMENT SOURCES IN THE POTOMAC RIVER BASIN, WASHINGTON, D. C. METROPOLITAN AREA

INTRODUCTION

Effective utilization and management of land and water resources in a river basin demands a comprehensive knowledge of sediment sources and drainage characteristics. Programs designed to conserve natural resources should be based upon factual information on a number of hydrologic and geologic variables. The nature and extent of sediment movement and the relationship of these phenomena to the environment are among these variables.

The erosion, transport and deposition of fluvial sediment are complex processes and are affected by many climatic, physical and man-made factors. Erosion rates are controlled by the quantity and intensity of precipitation, soil characteristics, topography and the amount of vegetation coverage. The amount of sediment transported by streams is affected by basin size, length, slope, percentage of impervious surface, the size of particles transported and several hydraulic factors such as stream velocity and turbulence. The activities of man in the basin influence significantly the erosion rate, and thus influence the total quantity of sediment transported by streams in the basin.

Recognizing the need for factual information on sedimentation, the Assistant Secretary of the Interior, Water Quality and Research requested that the Federal Water Quality Administration, Middle Atlantic Region, conduct a sediment investigation in the Potomac River Basin between Great Falls and Hallowing Point. The investigation was designed to provide answers to the following questions:

1. What are the sources of the sediment in the Potomac River Basin in the Washington metropolitan area?

2. What are the relative magnitudes of the sediment loads contributed to the Potomac River and its tributaries below Great Falls from these sources?

This report summarizes the results of an investigation made by the Surveillance Branch to answer the above questions. The investigation, as a result of the time limitation and the magnitude of the problem, was not comprehensive enough to define the complete erosion transport problem in the basin but should serve as a preliminary step to more detailed studies of special problems or areas in the basin.

Sediment Sources

DESCRIPTION OF STUDY AREA

The study area encompasses Washington, D. C. and the cities of Arlington, and Alexandria, Virginia and includes portions of Fairfax, Montgomery and Prince George's counties. Although the cities in the area have experienced tremendous development, portions of the counties remain in a rural state, primarily pasture or woodland. The population of Fairfax County alone has grown from 21,000 in 1940 to 360,000 in 1966 and is expected to reach 1 million before the end of the century.

The study area is located between Great Falls and Hallowing Point and encompasses the entire Potomac River Basin between these points. Land surfaces are less than 500 feet above sea level and are gently rolling. Runoff reaches the Potomac through small streams, which have well-defined channels and flood plains covered with a dense growth of brush.

Average annual rainfall exceeds 40 inches and is uniformly distributed throughout the year. Three types of storms cause erosion in the area:

1. Summer thunderstorms having short duration but high intensity precipitation.

2. Longer-duration but lower-intensity precipitation resulting from frontal storms occurring in any season.

3. Rainfall during the period February through

April cause high sediment transport conditions.

INVESTIGATION

Because the quantity of suspended sediment is determined from its concentration in a volume of water, a continuous measure of both the sediment concentration and the water discharge is the only precise way to determine suspended sediment discharge. Continuous water discharge at gauging stations is usually well-defined by present techniques, but the amount of sediment transported is not easily defined and must be determined by individual measurements. Daily sediment measurements, with more frequent observations during periods of flood runoff, are at present the most accurate method for determining sediment discharge. Sediment measurements at regular intervals are useful for making trend analyses and providing a base for checking less accurate studies.

Estimates of sediment loads in this report were determined by relating historical data to current flow records, precipitation and percentage of area under construction. (See Figure 1.) An initial reconnaissance flight was conducted to locate and select potential sources of sediment in the Washington, D. C. metropolitan area on May 8, 1970. (See Figure II.)

Aerial photographs were then taken of the sites in good weather on May 18, 1970. Also, the sites and streams affected were photographed aerially after a rainstorm to pinpoint sources and to illustrate graphically the sediment transport problem on May 17. Both true color film and false color infrared film were used, and an estimate of annual sediment contribution of each site was determined. (See Table III.)

A low intensity rainfall of .5 inches was recorded on May 17. The photographs taken after the storm revealed considerable erosion at many of the sites; however, only a fraction of the sediment transported by heavy rainfalls is represented.

This method of investigation provides interested agencies and individuals with a visual portrayal of the sediment problem in the basin but does not define precisely the exact amount of sediment load discharged. Approximately 5 percent of the existing sources of sediment are represented in the photographs.

Aerial photographs did not prove successful in documenting the extent of sediment problems caused by flash-floods resulting from high-intensity runoff from parking lots, roads, and man-made stream channels.

On-site inspection and ground photographs of such sediment sources as Sligo Creek in Montgomery County and Turkey Run in Fairfax County proved to be the best method of investigation of this particular problem.

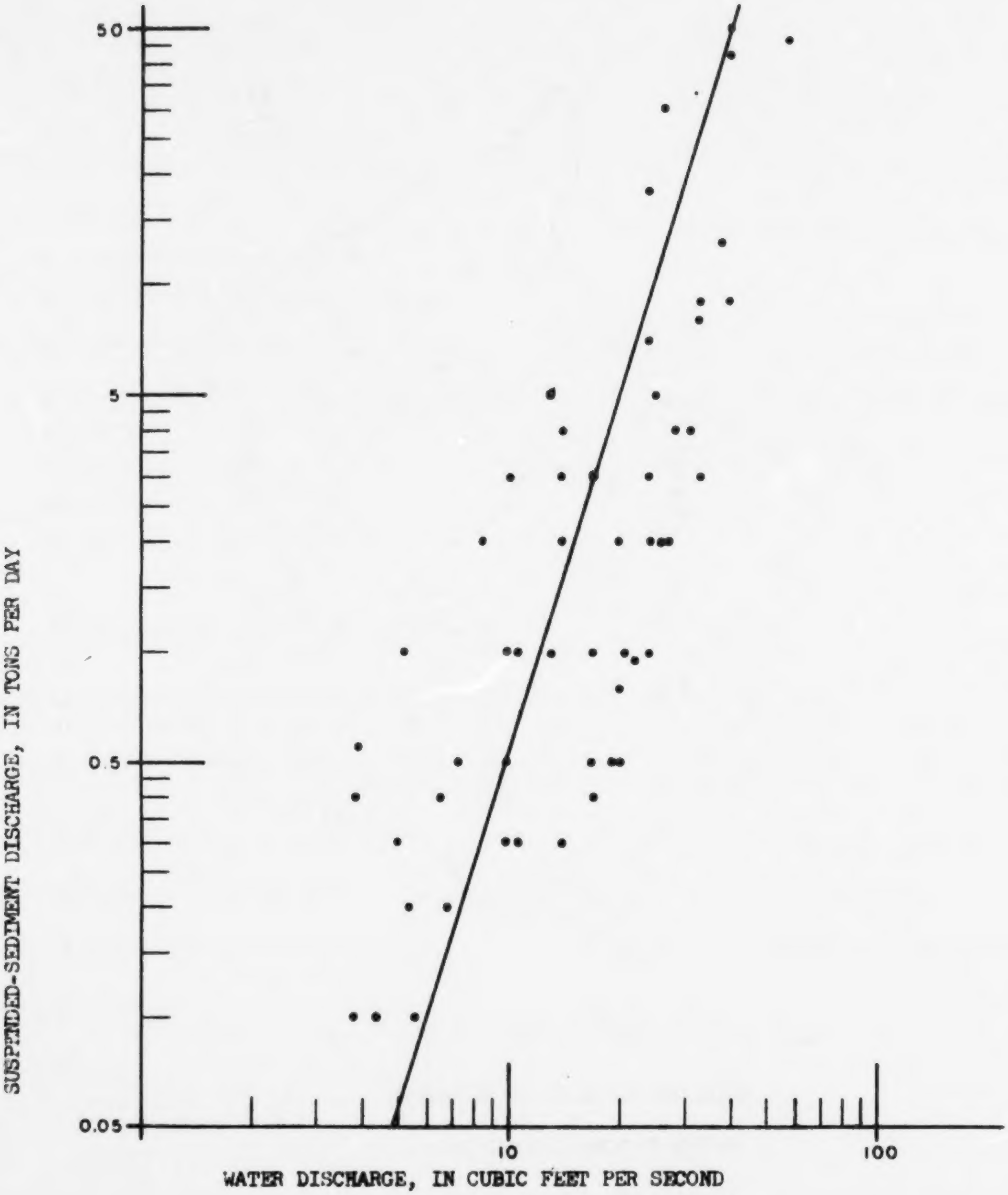
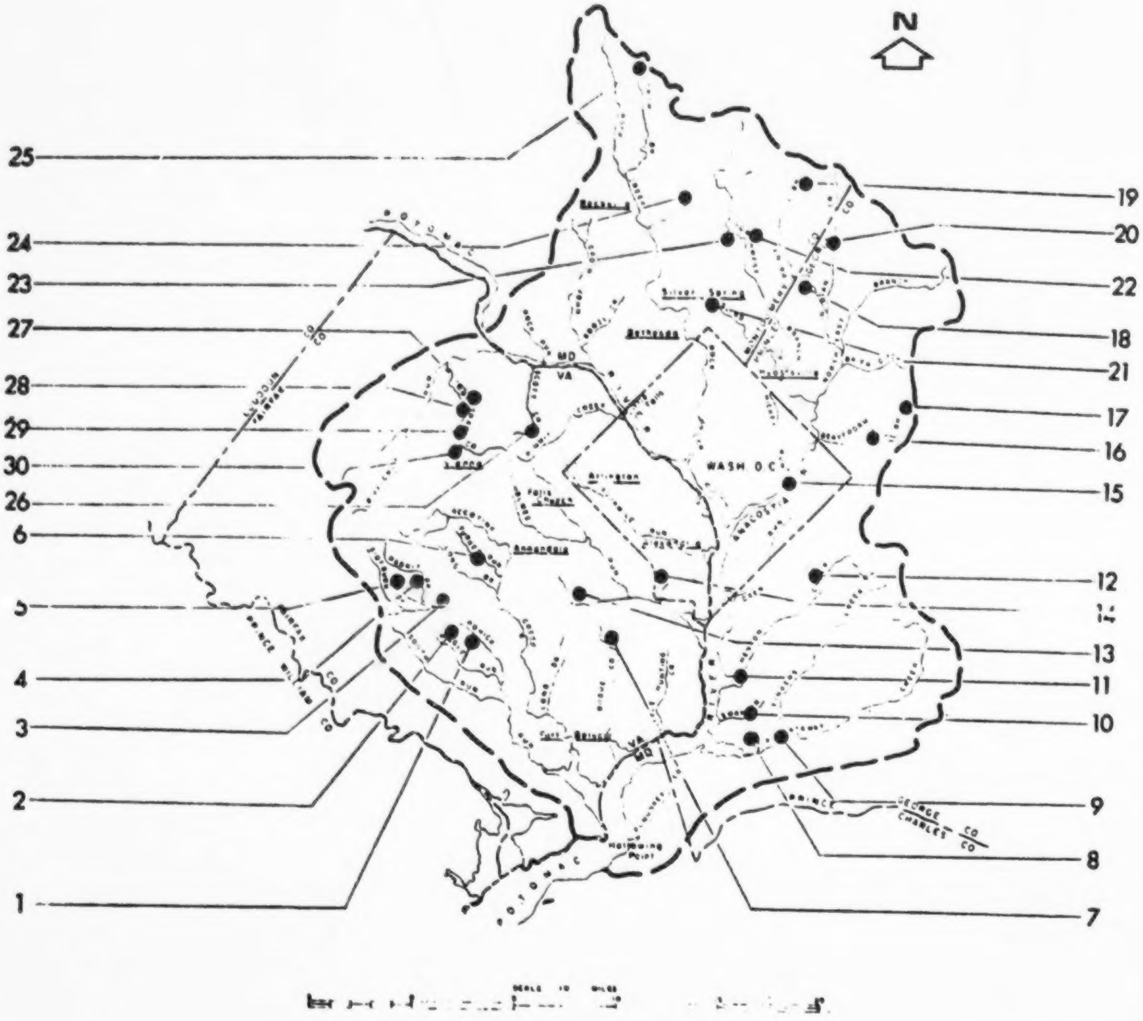


FIGURE 1. Sediment transport curve, N. W. Branch Anacostia River at Colesville, Md. October 1963-September 1964.

FIGURE I.



SELECTED SOURCES OF SEDIMENT
IN THE POTOMAC RIVER BASIN
(Great Falls to Hallowing Point)

FIGURE II.

SELECTED SOURCES OF SEDIMENT
IN THE POTOMAC RIVER BASIN
(GREAT FALLS TO HALLOWING POINT)

SITE NO.	NAME OF SOURCE	BUILDER OR OWNER	RECEIVING STREAM	APPROX. AREA
1	Keene Mill Subd.	Milton Fleisher Dev. Corp.	Pohick Cr.	107 Acres
2	Rolling Valley W. Subd.	Thomas Carey, Inc.	Pohick Cr.	322 Acres
3	Lake Braddock Subd.	Vienna Dev. Corp.	Pohick Cr.	428 Acres
4	Kings Park W. Subd.	Richmarr Const. Corp.	Pohick Cr.	591 Acres
5	J. W. Robertson Int. H.S.	Fairfax Co. School Board	Pohick Cr.	79 Acres
6	Oakhill Subd.	Vienna Dev. Corp.	Turkey Run	74 Acres
7	Sand & Gravel Mining	Virginia Concrete	Dogue Cr.	-
8	Piscataway Hills Subd.	Unknown	Trib. to Piscataway Cr.	-
9	Clinton Hills Subd.	State Builders, Inc.	Tinkers Cr.	50 Acres
10	Tantallon Subd.	Custom-Built Homes	Swan Cr.	-
11	Indian Queen E. Subd.	Country Builders, Inc.	Broad Cr.	-
12	Sand & Gravel Mining	Several Builders	Henson Cr.	-
13	Sand & Gravel Mining	Virginia Concrete	Backlick Run	-
14	Seminary Ridge Subd.	Pulte Master Builders	Trib. to Holmes Run	88 Acres
15	Anacostia R. Pk. Landfill	Washington San. Sub. Comm.	Anacostia R.	-
16	Road Work - Rtes. 202 & 704	State Hwy. Dept.	Beaverdam Br.	-
17	Ardwick - Ardmore Ind. Subd.	S & S Building Corp	Beaverdam Br.	10 Acres
18	I-95 Construction	Several Contractors	Paint Br.	40 Acres
19	Valencia Subd.	Larry Lerner	Trib. to Paint Br.	60 Acres
20	Sand & Gravel Mining	Capitol Concrete & Pipe	Indian Cr.	-
21	Wheaton Plaza		Sligo Br.	-
22	Stonegate Subd.	Jack Kay	N.W. Anacostia R.	150 Acres
23	Layhill Village E. Subd.	Jack Kay	N.W. Anacostia R.	95 Acres
24	Strathmore Subd.	Levitt & Sons	Trib. to Rock Cr.	250 Acres
25	Manor Lake Subd.	Allen Engineering	N. Br. Rock Cr.	100 Acres
26	Westgate Ind. Park	Westgate Corp.	Scott Run	40 Acres
27	Shouse Village Subd.	Interstate Const. Corp.	Wolftrap Cr.	187 Acres
28	Feline Center	Dept. of Interior	Wolftrap Cr.	-
29	Trails Subd.	DuPoint Development	Wolftrap Cr.	72 Acres
30	Waverly Subd.	Yeonas Land Corp.	Wolftrap Cr.	88 Acres

TABLE III.

Sediment Sources

SEDIMENT IN THE BASIN

Most of the annual sediment load in the Potomac River Basin is discharged during a relatively few days each year. During 10 percent of the calendar year, streams in the basin carry approximately 90 percent of their annual sediment load.

Although the drainage area in the Washington metropolitan area is about 5 percent of the total drainage area in the Potomac Basin, the average sediment discharged represents approximately 28 percent of the total average annual sediment load in the Potomac. An average of approximately 700,000 tons of sediment are transported into the main stem of the Potomac between Great Falls and Hallowing Point annually. An average of 2.5 million tons of sediment are estimated to be discharged in the entire basin annually. About 12 percent of the Potomac Basin sediment load is from the Anacostia River and Rock Creek basins and the area drained by these 2 tributaries represents about 1.2 percent of the total Potomac Basin.

In 1970 the amount of rainfall has been above-average and the rate of development has also increased. Considering these facts, it is estimated that the 1970 sediment load contributed by streams in the Washington, D. C. metropolitan area will be 1½ times the average annual sediment load. This indicates that over 1 million tons of sediment could possibly be transported to the Potomac this year.

ESTIMATED ANNUAL DISCHARGE OF SEDIMENT IN STREAMS IN THE POTOMAC RIVER BASIN. (Great Falls to Hallowing Point)

	Drainage Area (Sq. mi.)	Est. Avg. Annual Sediment Load (tons)	Projected Sediment Load-1970 (tons)	Est. Avg. Daily Discharge (cfs)
Difficult Run (near Great Falls,Va.)	58	16,200	24,300	53.4
Scott Run at mouth	5.13	1,400	2,100	4.7
Little Falls Branch (near Bethesda,Md.)	4.1	9,500	14,200	3.17
Pimmit Run at mouth	3.12	1.400	3,500	7.5
Rock Creek at Sherrill Drive, Washington, D.C.	62.2	99,500		55.3
Rock Creek	76.5	122,400	180,000	68.6
Sligo Creek at mouth	13.3	21,300	32,000	11.9
Wolftrap Creek	7.25	2,000	3,000	6.7
N. W. Branch Anacostia R. at mouth	53.2	102,500	155,000	54.0
N. W. Branch Anacostia R. (near Colesville, Md.)	21.3	10,000		21.6
N. W. Branch Anacostia R. (near Hyattsville,Md.)	47.4	91,300		39.3
N. E. Branch Anacostia R. at mouth	75.6	80,400	120,000	78.8
N. E. Branch Anacostia R. (at Riverdale, Md.)	72.8	77,400		75.9
Anacostia River at mouth	169.9	220,000	300,000	170.3
Oxen Run at mouth	13.5	9,300	14,000	14.9
Henson Creek at mouth	18.25	12,600	18,900	20.1
Henson Creek (at Oxon Hill, Md.)	16.7	36,000		18.4
Piscataway Creek at mouth	70.4	19,700	29,500	35.1
Hunting Creek at mouth	46.3	12,900	19,300	43.0
Dogue Creek at mouth	17.9	6,200	9,300	16.6
Turkey Run at mouth	.97	1,800	2,700	1.15
Sideburn Branch at mouth	2.34	6,200	9,300	3.32
Accotink Creek at mouth	50.9	35,100	52,650	64.4
Accotink Creek (near Annandale, Va.)	23.6	17,800		25.8
Pohick Creek at mouth	35.4	24,400	36.600	31.3
Fourmile Run (at Alexandria, Va.)	14.4	4,000	6,000	14.8
			TOTAL 1030,300	

Total sediment load contributed by tributaries equals 710,200.

TABLE IV

Sediment Sources

CONCLUSIONS

1. The primary sources of sediment in the Washington metropolitan area are residential, institutional and highway construction sites, sand and gravel mining operations, and extreme erosion caused by intense runoff from parking areas, man-made stream channels, and storm sewers.

2. Urban and suburban development are known to significantly affect sediment loads in the Potomac River Basin.

3. Suburban areas in all parts of the Washington, C. D. area are growing at a remarkable rate.

4. A secondary source of sediment in the Potomac is the process of backwashing of filters at water treatment plants. Three hundred and sixty-four tons of sediment are discharged yearly by the Dalecarlia water treatment plant alone. The magnitude of this problem is relatively insignificant when compared to the total sediment load transported by all sources.

RECOMMENDATIONS

1. Extensive sediment studies should be conducted on streams and discrete sediment sources in the Potomac River Basin. All sources, causes and amounts of sedimentation should be documented.

2. Regulatory measures must be adopted and enforced to control erosion from construction areas. (*Counties of

Fairfax, Montgomery, and Prince George's, and Washington, D. C. currently have sediment control programs.)

3. Where urbanization has caused severe flooding, construction of holding structures or other flow control devices should be considered.

4. Backwashing practices at water treatment plants should be evaluated and procedures implemented to reduce substantially this source of silt pollution.

- - -

REFERENCES

Anderson, Daniel G., 1968, Effects of Urban Development on Floods in Northern Virginia: U. S. Geological Survey, Water Resources Division, 26 pp.

Davis, W. J. and Yorke, T. H., Sedimentation and Hydrology in Rock Creek and Anacostia River Basins. Montgomery County, Maryland, Compolation of Basic Data 1965-1967 and previous years: U. S. Geological Survey, Water Resources Division, 54 pp.

Powell, J. D., Winter, W. C., and Bodwitch, W. P., 1970, Community Action Guide book for Soil Erosion and Sediment Control: National Association of Counties Research Foundation, 64 pp.

U. S. Department of the Interior, 1969, Potomac River Water Quality, Washington, D. C. Metropolitan Area: Federal Water Pollution Control Administration, 47 pp.

U. S. Department of the Interior, Water Resources Data for Maryland and Delaware, U. S. Geological Survey.

U. S. Department of the Interior, Water Resources Data for Virginia, U. S. Geological Survey.

Wark, J. W., and Keller, F. J., 1963, Preliminary Study of Sediment Sources and Transport in the Potomac River Basin: U. S. Geological Survey and Interstate Commission on the Potomac River Basin, 26 pp.

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STATEMENT OF GENERAL SERVICES
ADMINISTRATION, REGION 3

The Federal Water Pollution Control Act, as amended, the National Environment Policy Act of 1969, the Water Quality Improvement Act of 1970, and the Environmental Quality Improvement Act of 1970 places with the Federal Government the responsibility for leadership in protecting and enhancing the quality of our air and water resources.

General Services Administration, Region 3 is engaged in an energetic program of locating and correcting any situation where pollution may occur. Although our total effort encompasses public buildings in the entire District of Columbia, Maryland, Virginia, and West Virginia area, this report will be concerned only with the Washington metropolitan area.

Accomplishment to Date

We have worked closely with the Middle Atlantic Region of the Federal Water Pollution Control Administration in identifying problem areas, initiating corrective action, and in securing the most current information on water pollution abatement.

1. General

All domestic wastes produced in our buildings are discharged into the local sanitary system.

GSA

In anticipation of the District of Columbia sewer separation program, wherever construction projects in our buildings will permit, we are separating sanitary and storm sewer lines.

Plans for all new government construction and any pertinent modification of existing space are submitted to the FWPCA for approval. We also coordinate our efforts with the District of Columbia, Department of Public Health, in complying with amendment 13 to the Health regulations, pertaining to the prevention and control of water pollution.

2. Chemical and Industrial Wastes

All chemical wastes from the Old Bureau of Standards are packaged, transported to military installations, and burned or buried.

Industrial waste from the printing plant at McLean, Virginia is channeled to a dilution tank, diluted, and pumped to the sanitary sewer system.

3. Heating Plants

A. Central Heating Plant

The boiler blowdown was diverted to the sanitary sewer system. Industrial waste from the sluicing system is exhausted to the storm sewer. Toxic chromate chilled water system has been replaced with silicates.

GSA

B. Virginia Heating Plant

The boiler blowdown was diverted to the Virginia sewage disposal plant for secondary treatment.

C. West Heating Plant

FWPCA has inspected this facility and did not recommend any changes.

4. Virginia Sewage Disposal Plant

This plant has exceeded the minimum recommendations issued by the Potomac River Enforcement Conference since the conference first met in 1957.

Additional testing has been initiated in order to achieve better operational control.

Significant Changes in the Preliminary Planning State

1. Virginia Sewage Disposal Plant

Extensive additions to our plant are now in the preliminary planning stage. These additions include tertiary treatment for additional biochemical oxygen demand removal, nutrient removal equipment for nitrogen and phosphorus removal, and a chlorine contact tank for more effective chlorination. Additional staffing for the plant is currently under study.

2. Central Heating Plant

All coal-fired boilers will be replaced by 1980 with gas-oil boilers. This replacement must be phased in order to insure adequate heating capacity. This boiler replacement will eliminate the ash-sluicing system now in use.

3. West Heating Plant

These coal-fired boilers will be converted to gas-oil combination by 1974. This work must be phased with the work at central heating plant to insure adequate heating capacity. This conversion will also eliminate the ash-sluicing system now in use.

4. Virginia Heating Plant

These coal-fired boilers will be replaced by 1976 with gas-oil boilers. This replacement will eliminate the ash-sluicing system now in use.

General Services Administration, Region 3 will continue its concern and will take all appropriate action necessary toward making the Potomac River Estuary truly a showcase for the Nation.

* * *

STATEMENT OF

MARYLAND DEPARTMENT OF WATER RESOURCES

ACTION TAKEN ON RECOMMENDATION 3

The Department of Water Resources has continued forceful action to implement the requirements of Recommendation 3, as contained in the report on the 1969 Potomac River-Washington Metropolitan Area Conference. Recommendation 3 calls for compliance by 9 industries with orders of the Maryland Department of Water Resources, to provide adequate waste treatment by January 1, 1970.

Maryland law provides for the issuance of orders as the final step of a special water quality enforcement procedure. A detailed description of this "Notice of Violation Procedure" is available from the Department by request.

Specifically, the Department has taken the following action on Recommendation 3:

1. Mineral Pigments Corporation (Muirkirk)

   Notice of Violation issued on April 29, 1969

   Notice of Violation Hearing held on June 11, 1969

   Order for correction issued on July 22, 1969 and continued at that time, to allow time for additional inspections and the development by competent consultants of necessary control facilities.

   Order for correction issued January 2, 1970.

The company has partially complied with the Order.

Enforcement efforts by the Department continue.

3. A. H. Smith Sand & Gravel Co. (Branchville)

Notice of Violation issued on July 22, 1969.

Notice of Violation Hearing held on August 4, 1969, at which time it was determined that the Circuit Court for Prince George's County retains jurisdiction over sediment discharges from this operation. Since the sediment discharge to the waters of the State had been corrected by repair of the impoundment, further administrative action by the Department was not necessary at the time. Inspection and monitoring of this operation continues.

Order cannot be issued by the Department because court retains jurisdiction.

4. Banning & Sons Motors Company (Banning Plymouth, Inc.) (Hyattsville)

Notice of Violation issued on July 23, 1969.

Notice of Violation Hearing held on August 20, 1969. The Department has received a letter of compliance, stating that all process drains have been connected to the Washington Suburban Sanitary Commission's sanitary sewerage system.

Maryland Department of Water Resources

Order for correction issued on December 11, 1969.

The Order has been complied with: All process drains have been connected to the Washington Suburban Sanitary Commission's sanitary sewer system.

5. Devlin Lumber & Supply Company (Rockville)

Notice of Violation issued on October 28, 1969.

Notice of Violation Hearing held on November 20, 1969.

Order for correction issued on January 3, 1970.

Immediate, temporary corrective measures have been taken by the company, but have not as yet produced full compliance with Maryland's water quality program. Enforcement efforts by the Department are continuing.

6. Metropolitan Fuels Company (Bethesda)

Notice of Violation issued on October 29, 1969.

Notice of Violation Hearing held on December 5, 1969.

The company has corrected water pollution caused by a faulty oil separator. Periodic inspections are continuing at this industry.

7. Inland Materials Sand & Gravel Co. (Clinton)

Notice of Violation issued on May 20, 1970.

Violation was observed on May 14, 1970.

Notice of Violation Hearing has been scheduled for June 24, 1970.

8. Potomac Sand & Gravel Co. (Greenway Flats)

On June 16, 1969 the Department of Water Resources issued a "Permit for Waterway Construction" to the Potomac Sand & Gravel Company and included as part of that permit certain specific conditions requiring that the company's operations at this location will not contravene the water quality standards of the State of Maryland.

The permit and its specific conditions designed to protect the water quality in the Potomac River at Greenway Flats were accepted by an authorized agent for the Potomac Sand & Gravel Company, as noted in the acceptance clause in the permit.

9. Arundel Supply Company (District Heights)

Periodic inspections have been made at this industry, and the wastewater discharge found to be in compliance with Maryland's water quality standards.

NOTE: This industry is in the Patuxent watershed, and will not be included in future listings for the Potomac River-Washington Area Enforcement Conference.

Maryland Department of Water Resources

ACTION TAKEN ON RECOMMENDATION 8

The 1969 Potomac River-Washington Metropolitan Area Enforcement Conference recognized that: Because local government has responsibility for the approval of subdivision development, land grading, and flood plain development, the counties of the conference area are in the best position to effect sediment control programs.

Maryland's sediment control program, as implemented by the Department of Water Resources, is unique in several respects: It is based on a policy of active assistance, mutual cooperation, and effective utilization of existing State, county and Federal levels of government. It directs each county to adopt sediment control ordinances and to be the primary unit of government for administration, inspection and enforcement. This allows most control activities to stay in local hands and gives the State a backup role. It utilizes the Soil Conservation District in each county as a technical advisor for erosion and sediment control. It is fully integrated with the Department's existing pollution control activities.

County work accomplished to date in the enforcement area:

Montgomery - Subdivision regulations have been enacted. This was the pioneer county in Maryland to develop a sediment control program, beginning in June of 1965.

Maryland Department of Water Resources

The Soil Conservation District, assisted by the Department of Water Resources, has conducted a series of workshops in this county for the purpose of training county inspectors in erosion and sediment control.

Prince George's - Working on a grading ordinance: The Soil Conservation District, assisted by the Department of Water Resources, conducted a workshop in this county for the purpose of training county inspectors in erosion and sediment control.

The Department of Water Resources also has authority and responsibility for the control of sediment that causes, or is likely to cause, pollution of the waters of the State. The Department's "Notice of Violation Procedure" is now being applied to many instances of sediment pollution resulting from exposed and improperly graded areas of subdivision developments and other construction activities.

WATER POLLUTION CONTROL IN THE ANACOSTIA RIVER BASIN

The Northwest, Northeast and Paint Branch tributaries to the Anacostia River drain a region of Prince George's and Montgomery counties which includes sand and gravel mining and washing operations and highly-developed residential and commercial areas. Deposition in the waters of the State of sediment derived from land development activities is a

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significant problem in this watershed.

In this watershed, the following sources of water pollution have been identified, inspected, and appropriate action taken, as indicated:

1. Greenwich Apartment Development (Artery Corporation), Notice of Violation NOV-70185: Correct sediment transport to Northeast Branch.

2. Beltway Plaza Shopping Center, Order No. NOV-O-7089: Company ordered to submit plans by July 1, 1970, for the control of erosion and sediment deposition in Indian Creek.

3. Mineral Pigments Corporation, Order No. NOV-0-7004: Ordered to correct water pollution by January 1, 1970; discontinue the discharge of chromium and pigments into Indian Creek; court action pending.

4. Christian Bros., Notice of Violation NOV-70187: Correct the discharge of oil to Indian Creek from sand and gravel excavation used as a refuse disposal area.

5. University of Maryland, Notice of Violation dated 7-23-68: Correct fly-ash and oil discharge to Paint Branch.

6. Fairfield Farm Kitchens, Order No. NOV-0-7090: Ordered to stop filling of flood plain, and control erosion and sediment deposition and chromium waste

discharge to Beaver Dam Creek.

7. Washington Suburban Sanitary Commission, Anacostia Landfill, Notice of Violation NOV-70122: Correct improper disposal of waste printer's ink which caused pollution of the Anacostia River.

Oxon Run passes through D. C. and has a high coliform count. There are no industrial waste discharges. Sediment deposition is occurring in the stream.

Henson Creek tributary of Broad Creek has the Buffalo Sand and Gravel Company and the Silver Hill Sand and Gravel operation in the drainage area. Erosion of adjacent land and sediment deposition is occurring in the drainage basin. A Notice of Violation has been issued to Silver Hill Sand and Gravel Company.

FURTHER INFORMATION ON THE DEPARTMENT'S ENFORCEMENT EFFORTS

Persons interested in the water quality control program and activities of the Maryland Department of Water Resources, and desiring further, more detailed information on the Department's enforcement efforts to protect water quality in the conference area, are requested to contact:

Mr. Paul W. McKee, Director
Maryland Department of Water Resources
State Office Building, Annapolis, Maryland 21401
Phone: (301) 268-3371, Extension 410

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STATEMENT OF

CARL J. JOHNSON,

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

Under the terms of the third session of the Conference on Pollution of the Waters of the Potomac River and its Tributaries, Washington Metropolitan Area, May 8, 1969, the ICPRB was requested to assume certain responsibilities relating to Recommendations 8, 12 and 14. The following is a report on the activities of the Commission related to the three recommendations.

Recommendation 8

During the past year the Commission has continued its educational programs related to sediment control and has been exploring the opportunities for intensified programs. Deciding that such opportunities vary according to each level of government, we recently arranged a meeting with the several Federal departments and agencies who have responsibilities which affect or should affect sediment control programs. At the first meeting these included FWQA, USGS, HUD, FHA and SCS. At this meeting 4 points were agreed to:

1. This group, with certain additions, will continue to meet in an effort to coordinate Federal efforts in sediment control in the Washington area.

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2. We will attempt to establish training programs.

3. There will be a concerted effort to obtain good sediment control on public parklands.

4. We will attempt to establish a Washington area sediment project, benefits of which should be widespread.

This sediment control steering committee will meet again on June 19, 1970, to continue its explorations and deliberations.

During the past year the Interstate Commission has continued its efforts to secure financial cooperation in order that it might proceed with the production of its training film on sediment control practices. Its efforts have not been successful up to this time.

While not an activity of the ICPRB, it should be noted that the 1970 General Assembly of Maryland enacted a statewide sediment control law which should be of considerable benefit. Also, during early 1970 the District of Columbia enacted a sediment control ordinance.

Recommendation 12

During the fall of 1969 a subcommittee chaired by Mr. George Carley, ICPRB, surveyed the Washington area and issued a report of sediment control programs in being in the area. The report also listed certain recommendations. This report was submitted to the November 1969 conference progress meeting.

Recommendation 14

This recommendation requested that the ICPRB call a meeting to consider the entire Potomac Basin water quality problem with special emphasis on problems of nutrients, bacteria, sediments and pesticides.

The Commissioners decided that rather than one, there should be two meetings held, one for the non-tidal reaches above Washington, and the second for the estuary below Washington. The first meeting was held at Cacapon State Park, West Virginia on November 12-14, 1969; the second at Indian Head, Maryland on April 16-17, 1970. Our advisory committees and Commission have been studying these reports and we expect to have recommendations within the near future.

* * *

MR. STEIN: If there is no other objection, we stand adjourned.

(Whereupon, at 3:05 p.m., the conference was adjourned.)

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